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ERRATA.

Article I.—First line, for "I has," read *It* has. The first *three* sentences, as printed, read as *one*.

Page 3—5th line from top, for "same characteristics," read, same *microscopical* characteristics. 12th line, for "pina," read *pinna*. 13th line, for "molusk," read *mollusc*.

Page 6—10th line from top, for "periphrey," read *periphery*.

Page 8—10th line from bottom, a *period* after "*vitality;*" a capital W at "when," and a comma at "mature."

Page 9—6th line from bottom, between "or" and "man," insert *a*. 4th line from bottom, for "converva," read *conferva*.

Page 10—2d line from top, for "This plant is," read *These plants are*. 3d line from top, for "it consists," read *they consist*.

Page 11—6th line from top, for "of smaller size however than," read *and* of smaller size than.

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THE MEDICAL INDEPENDENT

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.* * By HENRY GOADBY, M.D., F.L.S.

I has been a favorite and long-cherished opinion with many Naturalists, that the development of animals is progressive. Exhibiting always an upward tendency; in other words, that an animal of lowly organization, has a disposition to produce animals of a higher type. And this continues in an unbroken series, till it culminates in man. It is this theory which has been sought to be exemplified by the author of "The Vestiges of Creation," an extremely well-written and plausible volume, but altogether visionary, if not dangerous, in respect to the doctrines it seeks to inculcate. That man, during the period of his development, has passed through a great number of *types* of organization, at which whole classes of animals remain stationary, is quite true. And more than this is equally true, viz: that man has commenced his existence on a purely *vegetable* type, and moreover that he retains some of these types permanently throughout the whole of his existence. Thus it will appear that, although man has never been a vegetable, nor an *animalcule*, a fish, tad-pole, or frog, he has yet, in the devel-

* Entered according to Act of Congress, in the year 1856, by Henry Goadby, M.D F.L.S. in the Clerk's Office of the District Court, of the United States of the District of Michigan.

opment of his tissues, passed through phases of existence which typify these things and creatures respectively, and other animals, throughout their lives. With this question, in extenso, we shall have little to do in this and the following articles; the object being chiefly to show the remarkable alliance, permanently subsisting between the conditions of plants and animals.

There cannot be a more sublime and beautiful science than the study of the elementary tissues of the two great kingdoms of organized beings. Of course, no such study can possibly be prosecuted, without the constant aid of the microscope—an instrument that has done more for science in modern times than language can express. Our obligations to it are manifold, no less in regard to the exposition of the individuality of normal tissues, than its adaptation to pathological research.

The microscopical examination of a plant, or any portion of it, reveals the fact that all its tissues are composed of vesicles or cells. These cells are either *simple* or *nucleated*, or they may be formed for the reception of special contents.

If we examine a thin slice of an apple or a pear, we shall find that they consist of simple cells, in a state of full distension by the fluid contained within them; these constitute the *pulp* cells of the fruit.

In making a thin section of the stalk of an onion, in addition to the bundles of spiral vessels, will be seen a beautiful example of these simple cells; such as is described in Fig. 1.

(*Fig.* 1.)

(*Fig.* 2.)

And Fig. 2 represents a corresponding simple pulp cell, from the fruit of the pine apple.

But are simple cells confined to the vegetable kingdom? We answer, certainly not. Simple cells of the true vegetative character exist abundantly in the animal kingdom; and the cell walls, although composed of an animal membrane, present the same characteristics, as we shall hereafter see, as those which distinguish the cell wall of a plant. Many of these animal cells are developed for the reception of special contents, viz: carbonate of lime. Such cells are seen in a great number of animal tissues.

It is sufficient, however, to give one illustration of them.

(Fig. 3.)

Fig. 3 represents the cells as seen by transmitted light, in a thin section of the pina shell a of bivalve molusk.

By comparing this Fig. with Fig. 1, who can detect a single point of difference, excepting that in the representation three *dark* cells are shown, arising from one of two causes, either from the greater density of lime which fills them, or the presence of air — most likely the latter.

In the simple vegetable cells we see merely a cell wall composed of what is termed *cellulose.* Now, what is *cellulose?* It possesses certain microscopical characters hereafter to be explained; but it also possesses certain definite chemical characters, which separate it from all other vegetable or animal tissues. Treated with sulphuric acid, it is instantly converted into starch, a fact that no other known tissue is susceptible of, so far as I know. How do we know it to be starch? Because we subject it for this express purpose to the action of another chemical re-agent, the tinct. of iodine. Treated with this fluid, a new combination results, known as the *iodide of starch.*

At this point of our inquiry, we have presented a beautiful illustration of the goodness, no less than the wisdom of God.

A vast number of vegetables, including all the cerial grains, and many others, are composed entirely of two elements, cells of cellulose, filled with corpuscles of starch. So far as we know, cellulose, as such, is not only innutritious but intractible, and such vegetables, therefore, would appear to consist one-half of

nutrient matter, and the remainder not only devoid of this element but creating a positive obstacle to its digestion.

Most likely the action of the acid gastric juice in combination with mucous, possesses the power of transforming the cellulose into starch, and thus rendering every part of such vegetables equally desirable and digestible. But is cellulose a solely vegatable product? By no means; it has been found in a number of cases in the centre of the substance of the human brain. How a vegetable tissue can be produced in such a remarkable situation, no man knows; we only know the fact.

That the tissue thus formed was purely and only cellulose, admits of no doubt, because, in every instance, it has been subjected to the action of the chemical re-agents, above described; and firstly, it was converted into starch, and immediately afterwards into the iodide of starch. These experiments are quite conclusive as to its precise nature.

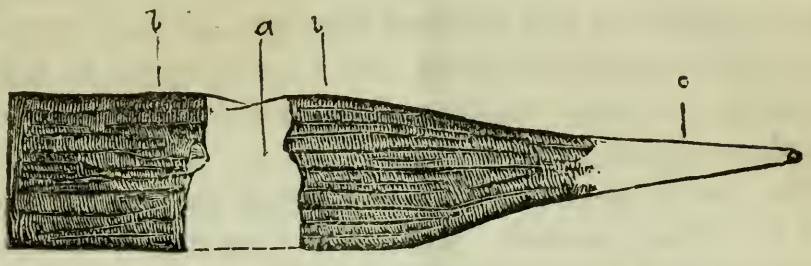
We have referred above to the microscopical characteristics of this tissue, and it is important to bear them in mind. They are four in number, viz: *perfect transparency, permeability to fluids, great elasticity*, and, lastly, *they are structureless.*

The human mind has great difficulty in grasping the latter idea. None but those who see the tissue for themselves, can understand the possibility of membrane being devoid of *structure*, especially when its existence, as a distinct membrane, is so readily perceptible. Yet such is the fact. The membrane is homogeneous, it consists neither of cells nor lines, nor any form that the mind can embrace. It is, in truth, *structureless.* This (apparently) nondescript membrane, which was first developed in the vegetable kingdom, is exhibited to a remarkable extent in the animal.

It constitutes the sheath of all the nerves of the body—*neurilemma.* It also forms the *myolemma*, or sheath, of the muscles. And it enters largely into the composition of other tissues, of which we shall hereafter present the examples.

The same characteristics apply equally (i.e., microscopically, but not chemically) to the same tissue, both in plants and ani-

mals, and to an extent so complete that the highest power of the microscope fails to detect a point of difference.



(Fig. 4.)

Fig. 4 represents a muscle of the "Hippocampus," a small fish common in all collections of Chinese insects, commonly called the *horsehead* fish, as the anterior portion of it represents the head and crest of a horse, such as is carved in a set of chess-men. The remainder of the animal is attenuated to a point, which is usually curled round. This creature had been immersed in absolute alcohol, and the effect of the spirit was greatly to contract the sarcous elements (*flesh like matter*) of the muscular fibre, and the cells of sarcolemma which contained them. But the alcohol had no power upon the myolemma, so that *a* shows the simple membrane, made apparent by the fracture and recession by contraction of the sarcous-elements, *bb*. At *c* is shown a continuation of the simple membrane, drawn out in an elongated form, as if tendinous.

Foetal life displays forms of simple membrane of an extremely beautiful character, and almost or quite peculiar to it. During the period that the crystaline lens is being formed, it is included between two highly vascular membranes, for this especial purpose.

At the fifth month of gestation, these vessels exist in a state of great perfection, but simultaneously with the performance of the function for which they were created, they begin to disappear by absorption, and at the seventh month they are not nearly so extensive as they formerly were. Although they include the lens between them, these membranes approximate to each other, but do not touch. Their vascularity, too, is derived from two distinct sources, and is essentially different

in character and distribution. The one membrane forms the *anterior* and the other the *posterior capsule* of the lens. Prior to the ultimate absorption of the *anterior capsule*, it quits the surface of the lens and becomes detached. This always occurs in the latter months of foetal life. Its presence as a distinct membrane is clearly visible, and as such it has been wrongfully named *membrana pupillaris.*

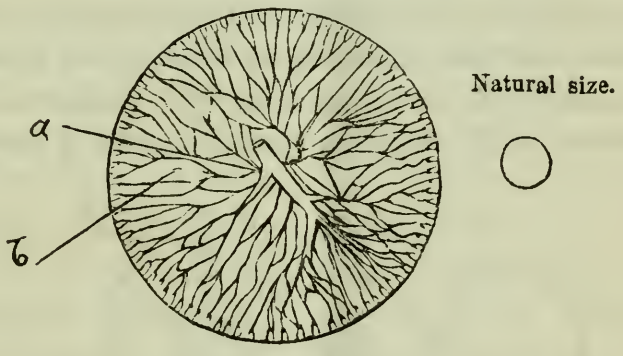
The vessels of the anterior capsule of the lens, are derived from the ciliary arteries. They form a series of four somewhat conical systems of cappillaries, whose base line is the periphrey of the circumference, and their apices verge towards the centre of the capsule. By reference to Fig. 5 it will be seen that these apices approximate to, but do not touch each other. The beauty of these vessels is indescribably great; the point, however, is not the vessels, but the membrane on which they are displayed. That membrane is seen everywhere between the interstices of the vessels, and especially at letter *a*, in the centre of the figure; this is another illustration of simple membrane.

Natural size.

(Fig. 5.)

It will be seen that the arrangement of the vessels in the posterior capsule is essentially different from those in the anterior. But whence is the supply of blood obtained, since, from its situation, the posterior capsule is cut off from the ordinary sources of circulation. There evidently exists, in connection with this membrane, a special want, as nothing short of a peculiar contrivance could meet the difficulty. The optic nerve, before it enters the sclerotic coat of the eye, is perforated on its side by a pin hole, as it were, just large enough to admit a

small arterial twig. This artery reaches to the centre of the nerve and then goes on, in a direct course, through the termination of the optic nerve in the retina, and is continued in a straight line through the vitreous humor, till it reaches the posterior capsule, and then it breaks up into a series of capillaries, which are distributed throughout the surface of the membrane. This capsule, however, is not nearly so vascular as the anterior. The termination of this vessel (*the arteria centralis retina*) in the capsule, is shown at letter *a*.



(Fig. 6.)

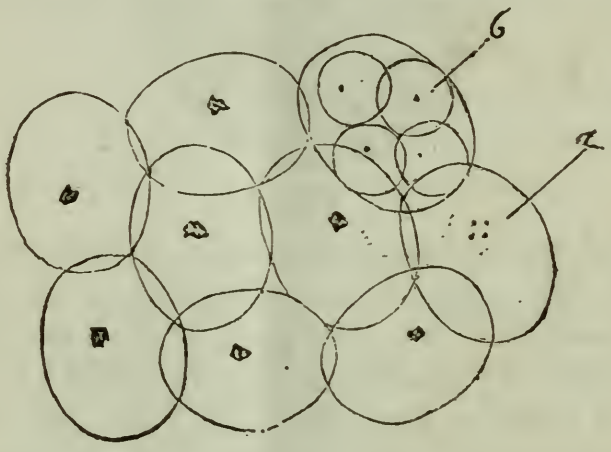
And one of the interspaces, marked *b*, directs attention to the fact that this capsule is also composed of *simple membrane*. At this moment, it is a moot point whether the posterior capsule be ultimately absorbed or not; surrounded by the vitreous humor, its position is peculiar, and I am not aware that we possess any evidence of the existence of absorbent vessels in this tissue of the eye. The general opinion appears to be, that, whilst we know that the anterior capsule is completely obliterated by absorption, the posterior capsule remains permanent. If this be so, it follows that, if the posterior capsule were composed of membrane *possessing structure*, it would necessarily produce blindness, as *structure* would interfere with the transmission of light and prevent the formation of perfect images on the retina. The vessels of the posterior, like those of the anterior capsule, when they have performed the function for which they were designed, ought to be absorbed. It occasionally happens, however, that they remain permanent, and in this case irremediable blindness is the fatal result.

I have thus endeavored to demonstrate the existence of a

very important membrane in the animal kingdom, so identical with a kindred tissue developed in plants, for the performance of a similar function, that the microscope fails to detect even an atomic point of difference. Still, they differ, for no process of chemistry can convert *animal simple membrane* into starch. So that, when the microscope is powerless, it is reserved for the chemist alone to discriminate between these tissues.

Other illustrations of *simple* membrane in the animal kingdom will ultimately occur, but holding a different relation to the membrane already described.

We have hitherto only examined the structure of the simple cells in plants and traced analogous membranes in animals, we will next examine the *nucleated cells* and endeavor to discover the phenomena which stand in connection with them.



(Fig. 7.)

Whenever these peculiar cells exist, their function is to extend the tissue by propogation. The nucleus or *cytoblast*, (from *kytos* a cell, and *blastema* a germ,) contains within itself an impregnated germ, endowed with all the elements of vitality, when it becomes sufficiently mature. This cell germ divides spontaneously, usually in the direction of its shorter diameter, (supposing it differs from a round figure;) subsequently it divides in the opposite direction, so that *four nucleoli* result from a primary nucleus. The development of the *cucumber*, like all the family of plants to which it belongs, is so remarkably rapid that one can rarely catch a primary nucleus within a cell. They will be seen to have undergone division and subdivision most extensively. This fact is illustrated at Fig. 7, which gives the

microscopic representation of a thin slice of *a cucumber*. Letter *a* directs attention to a divided and subdivided nucleus—displaying four *nucleoli*.

Much controversy has existed amongst botanical physiologists, as to whether the nucleus develops the cell-wall, or the cell-wall the nucleus, and the facts in confirmation of either of these opinions appear to be nicely balanced. The majority, however, appear to believe that the nucleus, or *nucleolus*, as the case may be, is firstly found, and that it then produces the cell, in which it is subsequently contained. The development of the cell-wall appears to be in this wise: After separation the *nucleoli* first assume a roundish form, they then recede from each other in the parent cell, and afterwards each *nucleolus* forms for itself a wall, within which it is contained. This fact is illustrated in figure 7, letter *b*, where four newly formed cells are seen within the parent cell. When firstly formed, cells, both in the animal and vegetable kingdom, are spherical. Their altered form results from the yielding of the elastic simple membrane to pressure; hence these newly formed cells, beautifully round whilst they are contained in the parent cell, are destined soon to take on an appearance more or less of angularity.

The new cells contained within the parent cell affect their liberation in one of two modes, either by the *bursting* of the parent cell, by which the contents are immediately set free, and have room to grow, or it is removed by absorption.

This beautiful and simple principle of development by cells —alike characteristic of plants and animals—was discovered by Schwan and Schleiden, and the more it is investigated, and applied as the explanation of phenomena till then unknown, the more important it becomes.

Every organized being, whether the majestic forest oak, an elephant, or man, owe their existence to the exercise of this principle.

The singularly beautiful fresh water converva (commonly known as the "Frog Spittle,") is really a *Zignema*, a plant extraordinarily attractive when seen by the microscope. It presents in the progress of its development phases of very great

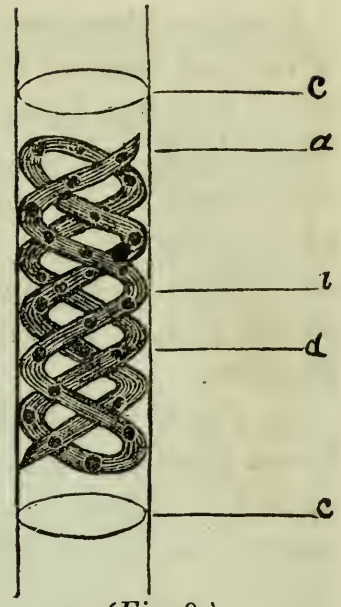
interest. The earliest condition in which I have obtained this species of conferva, is represented at Fig. 8. This plant is remarkable, inasmuch as it consists of a single cell, longer in one direction than in the other. These cells are joined end to end, in a series of much continuance which, therefore, represents, not an entire plant, but as many distinct individuals as there are cells.

(Fig. 8.)

The parieties of these cylindrical cells, of course consist of cellulose.

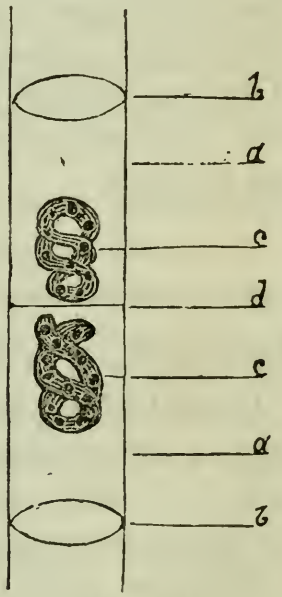
In the centre of the interior of each cell, will be seen, if collected at that period, which I state to be nearly the earliest, a solid cylindrical mass of *chlorophylle*, (chlorus, green; phyllum, leaf) in which a great number of nucleated spots are visible. After keeping this plant carefully, I saw a most remarkable change occur, in the cylindrical chlorophylle. It loosened itself out, as it were, so as to occupy a much larger space in the cell, and at this time the cell itself had considerably increased in length. By degrees the chlorophylle began to assume a more definite arrangement, and ultimately disposed itself into the form of double spirals, of most magnificent description, every where touching the sides of the cell-wall, and nearly filling the entire cell. The chlorophylle which had been in the first instance of a very dark green color, had now become very much lighter and brighter. What with the superb color of the green, contrasted with the pure white of the cell-walls, the darkness of the nucleated spots, and the extreme elegance and perfection

of the spiral coil, it is very difficult to conceive a more charming object! The nucleated spots, therefore, still remained, but of a deeper color than the chlorophylle in which they were imbedded, of smaller size however than originally. These facts are shown in Fig. 9, in which *a a* represents the diminished nuclei; *b*, the spiral chlorophylle; *c c* the septa which isolate this particular cell from those cells above and below it.



(Fig. 9.)

A short time after the plant had attained the state of development above described, another change took place. The chlorophylle began to contract as if shrinking up; soon after it divided midway, and the two halves became separated by the merest interval of space—sufficient to enable one to discern that a delicate line had been run completely across the original cell, thus dividing it into two. In Fig. 10 this septum is represented by letter *d*, the shrivelled chlorophylle at *c c*. *a a*, indicates portions of the original cell, and *b b* the septa which separated it from contiguous cells. After a few more days the masses of chlorophylle thus separated began to draw their coils closer together, with a view to the formation of a mass — darkening their color, and each removing itself as nearly as possible into the centre of the cells respectively.



(Fig. 10.)

In the mean time the septum, *d*, had become perfectly well formed, and in no wise differing from those indicated at either end, *b b*. In a few other days the once spiral coil had grown into a dense mass, in no way dissimilar from Fig. 8, except in size.

I believe, therefore, that Fig. 8 represents the last condition of the first stage of this remarkable process, in which it only differs from the figure in the diminished size of the cylindrical chlorophylle, and the decreased proportions of the cell. I have thus shown, as I hope satisfactorily, the successive stages by which certain simple plants are propagated, and we will now see if there be any anaolgy between the processes of reproduction in a plant, and the processes of reproduction in the animal kingdom.

As I have just described the phenomena characterizing the lowest plants, we will seek for a parallelism amongst the lowest animals. These are to be found in the class of microscopical *animalcula*—the invisible inhabitants of water. These creatures may fairly be compared to the *nucleated* cells of plants. They do not, however, exhibit the like aggregation of cells, except in some instances of Vorticella.

The whole of this class of animals is very transparent, which enables us to discern a great number of spots in their interior, which appear to be globular and of varying size. These spots have been unhesitatingly ascribed, by Ehrenberg, to nutrient sacs, and he has computed that some of these creatures possess upwards of three hundred distinct stomachs. Now as a man is compelled to perform all the functions of his nature by the aid of but one stomach, it seems no less hard, than strange, that a mere atom animalcule should possess three hundred stomachs and upwards.

To be Continued.

ARTICLE II.—*The New Haven Tragedy.*

Psychological phenomena, the study of which is of such deep interest and real importance to the medical practitioner, appears to be deplorably neglected. As a branch of useful education, its importance cannot be over estimated, and the knowledge of it forms one of the most important adjuncts of medical jurisprudence. These and the following remarks have been suggested by a very remarkable and pertinent case, which has recently occurred at New Haven—the murder of a man named

Mathews, and the complicity in this crime of a Mrs. Wakeman and others, her disciples.

Before describing the mental phenomena in connection with this case, it will be necessary to make a few preliminary observations.

The researches of the most talented and best informed men on the subject of Psycology, lead to the conclusion that we are all of us prone (if the causes exist) to *five kinds of trance*, the characters of which respectively, are distinct and specific. The first to be mentioned is really the last, and most serious form, viz: *death trance.* In this affection, death is so perfectly similated, that the consummate skill of the most accomplished physician fails to detect the yet lingering latent spark. Circulation and respiration are both entirely suspended; consciousness is gone. The body has acquired a death-like coldness, muscular motion has ceased; the brain is inactive, and the application of powerful stimulants produce no effect. The body is *as dead,* and as such is too frequently consigned to the grave.

Trance coma is distinguished from the former state by the retention of *very low* temperature, a breathing that is scarcely perceptible, and the slightest, faintest possible circulation of the blood. To all appearance the body is dead. There is not the least capability of motion, not even of a finger, nor an eye-lid, and the application of the strongest stimuli is equally inefficacious.

In this and the first described stages of trance, however, the patient *always recovers*—it is simply a question of time.

In death trance, patients have lain *eighty days without change,* and then slowly recovered. The like remark applies to *trance coma.* The affection may not endure for more than half an hour, or it may last for a long period of time. George Fox, the father and founder of Quakerism, lay fourteen days in a fit of trance coma.

Death trance is incompatible with the exercise of the functions of the mind; but in trance coma, on the contrary, the mind is constantly occupied with the most delightful dreams or visions, of such remarkable vividness and intensity, that no one can possibly understand, who has not been subject to it. Moreover,

such dreams are so connected that they wear the aspect of reality, and when patients recover from the trance coma, they believe that they have been subject to a vision, all the details of which were strictly true, and it is impossible to dispossess their minds of this impression. It is further most remarkable that the dreams of trance coma are invariably of a most exalted character, being seldom, if ever, disconnected from the Deity; for example, Geo. Fox was in Heaven for fourteen days and nights, in a state of the most perfect bliss, constantly holding converse with God and his angels.

If space permitted it, it would be easy to give a great number of illustrations, all confirming this peculiarity of the dreams of trance coma.

The next stage is *initiatory trance*, the characteristics of which are more vague, and uncertain, consequently more difficult to define, than those of the other forms of trance. It takes, too, so many and diversive directions; moreover, it appears to have its origin in a state of things, the converse of those which produce trance coma. The latter results from extreme exhaustion and depression of the nervous system. For example: the excitement of a fit of hysteria usually terminates in *trance coma*, of uncertain duration, and the like applies to cases of fever, which appear to ordinary observers *as merely a profound sleep.*

It is that complete quiescent state of the nervous system, in which the brain and nerves are not only nourished, but obtain repose as a relief from abnormal excitations. On the contrary initiatory trance results from the *superior exaltation* or intense excitement of the brain and nervous system. Thus, the "revival meetings" of some religious denominations generally produce cases of this form of trance, widely differing however, in degree from each other; depending of course upon the varying susceptibility of individuals.

These exhibitions are ascribed to the "manifestations of the Holy Spirit"—it is, unfortunately, the production of a disease, that may have even a *fatal termination*, and more often produces deterioration of mental capability.

In the dark ages, those pitiable victims who confessed to the crime of witch craft and sorcery with the stake and faggot

staring them in the face, were all of them the subjects of initiatory trance.

In this disease there is the same vividness and intensity of dreams; the like thorough connection of all its parts—but, unlike the former case, this is one continuous habit of *day-dreaming*. Such is the power of these dreams on the mind of the individual that he believes himself to be an actor in the scenes which passes through his demented brain.

Half-waking trance is somnambulism, and *waking trance* is catalepsy.

All the phenomena of animal magnetism, or electro biology, is referable to the latter form of trance, which, once excited, usually progresses into *catochus*, (a more severe form of spasmodic seizure than catalepsy) and terminates in clonic spasm, or epilepsy.

Space will not permit, neither do the circumstances warrant further details, at present, in connection with the definitions or tendencies of these several forms of trance. We may have occasion to continue this subject at a future time.

In reading the published account of the Wakeman case at New Haven, it seems to be perfectly clear that some years ago Mrs. Wakeman was the subject of *trance coma* during which she was visited with its concomitant vision. It was then that she died and *"went to Heaven."* All her revelations relating to this event, are so strikingly characteristic of the phenomena of *trance coma*, that no one who has ever paid the least attention to the subject can doubt its identity. She recovered, and thence glided into initiatory trance, in which state she appears to have continued, and so she remains to this time.

It is not the least remarkable fact in connection with these several forms of trance, that they are all of them known to be contagious and can be propagated.

For example: at a convent in Germany one of the Nuns formed the habit of biting her companions; presently another contracted the same disposition, and finally all the Nuns throughout the convent occupied themselves in continually biting each other. From the institution in which this affection first manifested itself, it soon spread to other kindred establishments, till, in the end, the *mania* spread all over

Germany. It even reached Holland, and was not put down till eventually it was brought to Rome.

Again, a Nun in France amused herself with *mewing*, like a cat; soon another began to mew; in the end the whole convent mewed, and amused themselves in this way for many hours on each successive day.

The neighborhood, *scandalized* and annoyed at this incessant cat-concert, complained to the authorities, who sent a regiment of soldiers to the convent with instructions to whip severely every Nun who thus offended.

After this, we would ask, is it any wonder that Mrs. Wakeman should have her disciples?

It is not too much to say, that, so fearful is the tendency to imitation, in this form of disease, that it behoves the authorities to look well to these disciples, every one of whom may, and probably will, perpetrate crimes similar to those, for complicity in which she is awaiting trial. No amount of punishment that can be inflicted would be likely to deter them from the commission of similar crimes.

The diseases of the mind are as surely epidemic as the diseases of the body.* No sane man can doubt for an instant that spiritualism is epidemic at this time, and when it has run through its phases, and had its victims, it will subside. This may be considered as a new form of initiatory trance; excepting in the persons of some "*mediums*" and "*manipulators*," whose proceedings are doubtless designing and fraudulent, the believers in this new "ism" are certainly the victims of this form of disease.

To show how dangerous it is to tamper with any of these forms of trance, either in our own persons or in the persons of others, it is sufficient to say, that, there is a remarkable tendency for any one form of trance to glide insensibly through all the rest, till it culminates in the severest form of epilepsy at one end of the chain, or death-trance at the other.

H. G.

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* An opinion fully confirmed by the researches of Good, Watson, and others.

ARTICLE III.—*On the Origin of Tumors—their Development and Degeneration.*

The subject of tumors, beyond what is recorded in our "text books," does not seem to command the interest of studious inquiry, which as a branch of pathology it justly claims. A general knowledge of their structure, classification and treatment, is very apt to be regarded as sufficient for all practical purposes. But so long as those who are most skilled in operations for their removal and treatment, are prone to commit error in diagnosis; so long as the inquiry from the patient: "Well, Doctor, what 's the cause of them?" is not readily and correctly answered, just so long will it remain a subject worthy of extended investigation. To say, in answer to such a query, that "they are the result of a bad state of the blood," or some change has taken place which is not well understood, is a facile and summary mode of dismissing the subject from the minds of *some*, but to others it exhibits the stigma of ignorance which ought to be attached only to the empiric.

In reviewing the subject, as presented by our latest and best authors, it is a matter of surprise how little reliable information is possessed in reference to it. Each author appears, to the best of his ability to "dodge" the question and do all in his power to avoid a statement that might in the least degree compromise his reputation for the future. Every author treats it as a delicate question — as if the less said about it the better, and every attempt to seek *positive* information signally fails. These remarks, so generally applied to writers, are as true in their application to the last and best accredited author, Mr. Paget, of St. Bartholomew's Hospital, as to any one else. After a careful perusal of his writings on tumors, which occupy one half of his "Lectures on Surgical Pathology," it must be confessed and deplored that many remarkable discrepancies appear. For example: on one page he says positively that it *is*, what, on the opposite page, he has quite as positively declared *it is not*. The reader will bear in mind that these remarks are intended to apply only to that portion of the lecture which embraces the history of the origin and development of tumors. The classification and the examination of them in their degenerate condition, is satisfactory and highly instructive. Lest

we should be accused of undue severity towards a popular writer and author, we deem it necessary to place the sentences which we challenge in opposite columns, and the reader will then be able to form his own opinion in the premises:

LECTURE XXI.	PAGE 329.
All its members (Hypertrophy and overgrowths) consist in additions to the organized materials of the body, and appear to be expressions of a morbid excess of formative force.	(24th line from the top.) One of these alone seems to need disproof; viz: that tumors, whether innocent or malignant, are due to the organization of effused blood, or of some inflammatory exudation, or of *the material of repair.*

In the paragraph first quoted, Mr. Paget tells us that these diseases "appear to be expressions of a morbid excess of formative force," and in the second paragraph he speaks of "hypotheses which need disproof," and excludes "material of repair" as objectionable.

Does he mean to attach a different meaning to "formative force" and "material of repair?" for, unless he does, it strikes us very forcibly that we have exposed a manifest contradiction. So that, whatever views we entertained after reading the first sentence, must be annihilated by the perusal of the second.

PAGE 320.	PAGE 321.
(5th line from the bottom.) And so if we can ever attain a knowledge of the origin of a tumor, it may avail little, unless it supply, also, the explanation of its progress.	(12th line from the bottom.) As we can have no complete idea of any living thing, unless it includes the recognition of its origin.

In the first of these statements he holds the knowledge of the origin of a tumor secondary to "the explanation of its progress." Whereas in the other sentence, he declares that "we can have *no complete idea* of any living thing, *unless it includes the recognition of its origin.*" Now what do these statements mean? We thought we understood the first paragraph, but feel sorely puzzled with the second.

Again, Page 329—(2nd line from the top.)

"For the present, I will say only, that I think malignant tumors, are local manifestations of some specific morbid states of

the blood, and that in them are incorporated peculiar morbid materials, which accumulate in the blood, and which their growth may tend to increase."

What does he mean by *specific morbid states of the blood?* and *peculiar morbid materials?* Is he guessing at it? or has he *ever seen* these peculiar morbid states, and peculiar morbid appearances? If so, why does he not describe them to us, that we may look for and find them.

If I were to depend alone upon my own resources, in connection with this subject, I should probably add but little to what is already known. It is a most intricate and perplexing one, and necessarily requires a most extensive use of the microscope, with special reference to the questions involved. I am fortunate, therefore, in having a higher resource, and authority which I believe will be acceptable to all who appreciate scientific attainment, in the practical observations, and extended research of our senior Dr. Goadby. Let us see now what he has to add upon this subject. R.

"In conjunction with the foregoing remarks, I take it upon myself to say that I have frequently examined the blood of patients whose every organ was the seat of cancer, as proved by subsequent Post Mortem Examination.

But I never saw any specific or other *morbid states of the blood!*" I could never detect any disease in the blood, and in a number of cases the blood appeared to be healthy whilst the patients were victims of disease.

I feel inclined therefore, to question the premises on which this statement is founded; moreover it occurs to me, that if this view of Mr. Paget be tenable, it must happen in the nature of things that, at least occasionly, a tumor *would be found in a transition* state, and thereby corroborate this opinion; whereas he expressly declares on the same page, (line 3d from the bottom,) "No intermediate conditions have yet been found between blood or lymph, and a tumor." It happens however, that my views greatly conflict with those entertained by Mr. Paget; I believe too that his mode of conducting his investigations has not only been erroneous, but likely to end in no profitable result. It appears (and I avail myself of his own confession of the fact,) that his examination of tumors has been

restricted to the period in which they were fully formed, and presented only the principle of "degeneration and disease." He seems to have satisfied himself with making microscopical examinations of tumors in such conditions, and has no doubt faithfully recorded the appearances presented on these occasions respectively.

But there are other, and as I believe, more profitable modes of examining tumors which Mr. Paget has altogether neglected.

I happen to know that this gentlemen possesses no skill in the use of the *injecting syringe*, and I well remember the occasions on which he laughed at, and derided the use of this instrument in the prosecution of such enquires. I cannot forget the time when he asserted that "*all that minute injections had done, and the microscope confirmed, in relation to Pathology, was limited to the discovery of Varicose Capillaries.*" and a hearty laugh followed this sentence.

In my experience the injecting syringe is not only most important, but I believe it to be the only instrument capable of affording a ray of light, on this confessedly difficult subject. Through its instrumentality, I have seen on more occasions than I can enumerate spread over a period of not less than twelve years, newly formed cancerous tumors, many of them not larger than a pin's head, and from this minute point, intermediate in size to the dimensions of a pea, or bean, and unless they had been *injected* they would have eluded observation.

In each of these instances the tumors were suspended from a *single capillary blood vessel*, and that capillary had faithfully transmitted the injection to the plexuses of new vessels, formed in the tumors severally. Now if such tumors had been seen at all in an *uninjected condition*, they would simply have been described as "hanging by a pedicle," and nothing would then have been known of the great vascularity of the new growths. I believe that the vessel from which these tumors were suspended, was itself abnormal, which constitutes the first step in the construction of a tumor, that might ultimately acquire considerable size, and finally degenerate into *any thing*. Due to the same mode of proceeding, another fact may be cited, viz—the remarkable rapidity with which *degeneration*, some-

times, treads upon the steps of formation. The injecting syringe first develops an abnormal vessel, and the microscope subsequently reveals the fact that that vessel is the seat of cancer.

From these observations I feel constrained to believe that if we would learn any thing touching the origin of tumors, we should examine them in their earliest possible conditions, altho' to trace their downward tendency is doubtless very interesting, and not altogether unassociated with points of importance.

When the period arrives, at which the vessels instrumental in the production of a tumor, become obliterated, because they are included in the tumor itself, how can a section, microscopically or otherwise examined, lead to the knowledge of its primary condition ?

The opinions which I entertain respecting "Morbid Growths," render the process an extremely simple and easy one, and based on strictly natural laws.

I believe that the same agency employed in the reparation of parts, or organic structures, is equally employed for the fabrication of abnormal growths. I think that conditions of the body may and probably do exist, in which the liquor-sanguinis of the blood contains, and is constantly supplied with an undue proportion of albumen and fibrin, that the super-abundance of these elements is rolled up into the colorless corpuscle, to get it out of the way, and thus preserves the equilibrium by maintaining the specific gravity of that fluid.

From all the experiments that have been instituted in relation to the colorless corpuscle of the blood ; especially experiments upon the frogs foot, it is fair to say that, we know its function to be to repair injuries, and produce growth. If this be true, we can have no difficulty in understanding that when these corpuscles exist in excess, and have no longer legitimate duties to perform, their busy activity leads to the production of mischief, and they arrange themselves for the construction of abnormal or adventitious growths.

Now when my attention was called to the first sentence of Mr. Paget's lecture quoted above, in which he speaks of "*Hypertrophies*, or *Over Growths*," and declares that they owe their origin to "*a morbid excess of formative force*," I believed that

he understood the true philosophy of his subject, according to my own views of it. The meaning which I attach to these few words, conveyed all that I would say upon the subject, and the facts appear to be condensed into a "nut shell."

But a careful perusal of this lecture, assures me, that in his hands the words mean nothing, for shortly after, they are positively contradicted, and in place of this theory, the morbid states of the blood are made responsible, as the basis of his philosophy.

It occurs to me, *en passant*, that if a morbid condition of that fluid really exists, and has anything to do in the formation of structures, *normal* or *abnormal*, as it circulates everywhere throughout the body, I can not understand why tumors are not simultaneously produced in every tissue. I can not at all comprehend the process by which the "morbid blood" can be localized, and kept out of the general circulation. These are questions, which *perhaps* Mr. Paget can explain, but they far transcend my philosophy. I would also be glad to know how morbid blood possesses the power to organize or generate *any thing?*

In the production of a tumor, the first process appears to be directed to the formation of new vessels, in the blind extremity of which the colorless corpuscles congregate, extend and enlarge it to the size of a pin's head, or the like process when the activity is greater, may produce those bulgings of the new vessels which have been called "*Varicosities.*" All these points of enlargement serve as so many nuclei, around which the tumor may be formed, and as the supply of nutriment, (colorless corpuscles,) is abundant, the tumor continues to increase.

By this time, as the excess of nutriment is diverted in this particular direction, other vessels are developed for its nourishment, and on this principle, it continues steadily to increase until a tumor of any dimensions may result.

There is yet another mode, that is very extensively employed in the development of tumors, particularly of such kind as may hereafter become tumors of medullary cancer.

So far as I know those persons who have hitherto devoted their attention to the microscopical examination of morbid

growths, have rarely, if ever, made sections of them sufficiently thin to enable them to ascertain its ultimate elements.

Under any circumstances, even with thick sections, such tumors commonly show an appearance which is generally described as *fibrous*, and so it is; but how does it become fibrous, and what is its nature?

To answer this question, we must first consider the mode in which the colorless corpuscles arrange themselves to form a tissue. And this leads us to consider, as a pertinent illustration, the process of "healing by the first intention." We shall find upon careful examination that this process results from the tendency which the colorless corpuscles have to *fibrillate*, and thus the margins of a wound are brought together by the *fibrillation of fibrin*. This is the most common exhibition of the colorless corpuscles, and I have no doubt that the persistency manifested by these corpuscles to *fibrillate* constitutes the origin, of by far the greater number of tumors.

It appears to me that tumors constructed on this principle, remain unchanged for a greater length of time, and exhibit less disposition to degenerate. Whereas, tumors developed through the direct agency of the vascular system appear to be much more prone to rapid degradation.

Of the circumstances which lead to the degeneracy of these tumors, I can at present form no accurate idea.

I would observe that those tumors destined eventually to become scirrhous in common with many other forms of morbid growth, not cancerous, have their origin in *new* or *adventitious* vessels. Such tumors are therefore, in their earliest stages essentially *vascular* tumors; but as they continue to increase in growth, the supply of blood is not equal to their requirements, hence they lose their vitality; in other words, they die—and dieing, decompose. The *degeneracy*, or *degradation* of these tumors is but their *decomposition*, resulting from the want of sufficient nourishment, a fact abundantly confirmed by the microscope.

In addition to corpuscles of every conceivable form, particles of various sizes and shapes are seen floating in the field of the microscope; these are apt to be considered as particles of

extraneous matter; they constitute in reality, the debris of the tumor.

The tumors probably destined one day to become *medullary* cancer, originated in *fibrillated fibrin*, and these are *non-vascular* tumors. So long as they continue to grow by the slow but steady increase of materials, they are enabled to maintain *a low degree of vitality*, which is all they require, as the structure of which they are composed ; is *pure*, *normal* and *vital*.

At sometime (an uncertain one,) after they have ceased to grow, there is a want of organization, and for the lack of it, they too die, and decompose.

Another form of cancer exists, which is not of such frequent occurrence as the former kinds, viz—*melanosis*. I have but little personal acquaintance with these tumors, in regard to their origin; I know, however, that they are vascular tumors, and that in them great capability exists for the production of *pigment cells*; to this fact, they mainly owe their distinction, as a specific form of disease.

If the views advanced in this communication should bear the test of subsequent enquiry, on the part of other investigators, as I feel persuaded they will, the classification of tumors will be greatly simplified, because based on the principles in which they have their being.

There can not be a greater waste of time or more unprofitable occupation than to slice up rotten tumors with a view to discover *their early history*, on the one hand, and to found a system of classification based upon their microscopial appearances on the other.

I have shown that in some cases, degeneration is coeval with the production of the first vessel, and we know practically, that hundreds of cases of tumors occur, in which no tendency to degeneracy ever exists.

These simple tumors, that are constantly submitted to medical men for their examination, which do not cause any suffering or inconvenience to the patient, are generally, and prudently, let alone. Moreover it frequently happens that such tumors having attained a certain size, cease to grow, and remain in the same condition for many years. May not such tumors be fairly regarded as safety valves?—that they appropriate the excess

of the colorless blood corpuscles, during the short time that they are present, and when their excessive production ceases, the tumor no longer continues to grow? As the like condition of things never again occurs to the same individual, so the tumors neither increase in size, nor are other tumors formed.

Finally, I would say as a resume, that I believe that growths, as well abnormal as normal, owe their origin to the operation of fixed natural laws; that originally tumors are *not* necessarily *morbid, nor malignant.* They are simply adventitious—in other words, they make their appearance in situations where they have no business, and that they become morbid by degeneration from their original type which, for some or other reason cannot long be maintained.

Thus it will appear that a tumor when firstly formed may be harmless; after a time it *degenerates* and *supperates*, in which condition only it should be considered malignant. With regard to their origin, it will be seen that the same colorless corpuscle manifests one, of two modes of proceeding in the production of adventitious growths, it either commences by the formation of new vessels, or it fibrillates.

H. G.

ARTICLE IV.—*An Interesting and Instructive Case.* By E. LAUDERDALE, M. D. *Subsequent Autopsy.* By Drs. GOADBY, LAUDERDALE, and ROBINSON.

MESSRS. EDITORS:—

At your request, I present to you a brief history of the case of Mr. L. B. P., as far as my knowledge of it extends.

Before proceeding with this account, I ought to premise that the patient was for a short time, only, under my observation. The *facts* connected with the early history and progress of the case, were communicated to me, either by the patient himself, or by some member of his family cognizant of the same.

Mr. P. was aged about 63 years. His temperament was nervous sanguine. He had followed mercantile pursuits, the greater part of his life; and was noted for his extraordinary energy and perseverance. His habits were strictly temperate. His use of

tobacco, which sometimes approached excess, may form a slight exception to this.

SEMIOLOGY.

Mr. P. first applied to me for medical advice on the 8th of October, 1855. He complained chiefly of debility, and of a painful diarrhœa. This diarrhœa would sometimes partially cease for a day or two at a time. It was very sure, however, to resume its original character after a short interval. The dejections were thin, and of a bilious complexion. They were accompanied by a severe *tenesmus*, which at times seemed almost beyond the possibility of endurance. The appetite was rather capricious; yet he had not lost his relish for food,—when first taken, it was the source of no uneasiness whatever; but after it had been four or five hours received it was very frequently the cause of intense suffering. This peculiarity the patient denominated "dyspepsia of the bowels." He said it had troubled him for some years.

The patient was frequently called upon to void his urine, particularly at night. This symptom was not constantly present, but occasionally, for several days in succession. His nights were passed in a restless manner,—a general feeling of uneasiness was constantly present whenever he sought rest. He had often a painful sensation in the abdomen, which he described as an outward pressure. This pain was referred to the umbilical region. Aside from the *tenesmus* already described, he suffered at times from a distressing pain along the course of the rectum, and the descending colon. This pain became greatly aggravated, and almost constant, whenever the diarrhœa was severe. He supposed this symptom to be the result of Hemorrhoids,—a disease from which he had suffered more or less during the last 15 years.

GENERAL APPEARANCE AND EXAMINATION.

At the time the patient first applied to me for medical advice, he presented at first view, all the external appearances of a person laboring under some organic disease, that was gradually, but surely undermining the powers of life. His complexion was of that peculiar cachectic hue, that is usually associated with cancerous disease. His face and limbs were considerably bloated. His respiration was regular; but his respiratory organs

appeared to labor under *pressure.* His manner of performing this function, suggested to the observer the probability either of hypertrophy or dropsy of the heart. His pulse was somewhat accelerated—averaging between 90 and 95. With regard to its rythmical character, no irregularity was detected. The lungs were comparatively healthy. Neither functional symptoms nor physical signs indicated anything positively to the contrary. There was no pain, nor *absolute* difficulty in taking a full inspiration whenever the requisite effort was made. It ought to be stated that no very critical examination of the lungs was instituted.

The cervical, sub-maxillary and axillary glands were considerably swollen, or enlarged.

The point, however, to which my attention was chiefly directed, was the abdomen.

Situated within this cavity, and extending from the left Hypogastric region obliquely downwards, and forwards, to the inferior margin of the umbilical region, a hardened ridge, or elongated tumor might be clearly felt, through the abdominal walls. The lower third of this ridge or tumor was somewhat sensitive to the touch, and quite painful when roughly manipulated.

PREVIOUS HISTORY.

In giving a history of his present sickness, the patient dated its commencement back about 18 months. He supposed it to be the result of an attack of bilious fever, which followed a severe exposure, in riding through a rain-storm on a cold night. This fever did not last long, but it was succeeded by a troublesome diarrhœa, which eventually became chronic, and from which he was seldom after that period free. This diarrhœa was attended by an irritable rectum and tenesmus, already spoken of. With a view of mitigating this latter symptom, he resorted at one time to the use of cold hip-baths,—using as many as seven or eight during a day. Immediately following their use the glandular swellings, (already noticed) made their appearance. At this time no tumor had been discovered in the abdomen. Its existence was only known several months later; when it was discovered, not by the patient himself, but by his son, while in

the act of assisting him to dress. This would go to show that the tumor had not yet become a source of direct irritation.

PROGRESS AND DECEASE.

When I first saw the patient, he was able to walk around, so that he consulted me at my office. A long and tedious journey, however, together with the gradual progress of the disease, soon brought him to his bed.

From this time to the time of his death, his worst symptoms gradually augmented.

The abdomen in the umbilical and left iliac regions became excessively painful and tender to the touch. The diarrhœa was greatly aggravated, and the tenesmus attending it was a source of constant suffering. There were no external signs of febrile excitement. The blood had entirely forsaken the capillaries of the surface; and complete anemia formed a marked feature in the case. The appetite failed gradually. Thirst was almost incessant, solid food could not be endured. The patient was now nourished on beef tea, wine whey and Port wine. Little or no rest could be obtained, even though anodynes were resorted to, for the purpose of procuring it. About ten days previous to his death, his pulse became intermittent—losing every thirtieth beat. This peculiarity it maintained to the last.

His death which occurred on the 21st of Dec., 1855, was immediately preceded by no other symptoms than those already described, except that for four or five days previously to this event the *discharges* passed off involuntarily, and had a *semi-cadaverous* smell. Mingled with them, were particles of blood, and a quantity of matter resembling pus.

DIAGNOSIS AND TREATMENT.

The diagnosis I made in this case was enlargement of the spleen, and malignant disease—probably scirrhous of the mesentery. This diagnosis was concurred in by Dr. R. S. Rice, of this city, who saw the patient with me shortly before his death.

With regard to the treatment adopted, little need be said. The case I considered hopeless, from the first. Nutritious food was prescribed, and with a view of mitigating present sufferings, palliative remedies were sometimes administered. These last, however, performed their mission but poorly.

It may perhaps throw some light upon the nature of the *glandular* swellings recorded, to state the fact, that about the time I first saw the patient, I prescribed Iodide of Potassium, with a view of noting the effects of this remedy on the enlarged glands. During its administration their size became very materially lessened. They never afterwards resumed their enlarged condition, although the remedy was discontinued after a short time.

ENUMERATION OF PREVIOUS SICKNESSES.

As the autopsy revealed lesions that cannot justly be attributable to cancerous disease, we must look to other causes for an explanation of their origin. It may facilitate this enquiry to enumerate the different attacks of sickness suffered by the patient during his life. This I will attempt to do, giving at the same time the character of each attack in its order. From these data, the reader may draw his own conclusions.

His first severe sickness was in the winter of 1831. It is only remembered as being of an inflammatory character.

His next sickness was in 1839. This was a severe attack of inflammation of the bowels. After his recovery from this illness, he was the subject of severe turns of dyspepsia. This state of things continued with greater or less severity for four or five years. In the winter of 1845, the patient experienced a severe attack of inflammation of the lungs. After a partial recovery he was advised to seek a warmer climate. A winter's residence at San Antonio, Texas, restored his health.

In the autumn of 1851, while traveling in this State, he contracted an intermittent fever. It was of medium severity and duration. It was succeeded in the following winter by an attack of acute Rheumatism. This last disease attacked only the extremities. It did not metastasize.

This completes the record to the time of his last sickness, already described.

E. LAUDERDALE, M. D.

[The foregoing case we regard as instructive, and a valuable coincidence, occurring simultaneously with the completion of our paper on the origin, &c., of Tumors, inasmuch as many facts confirmatory of our theory are herein presented.—EDS.]

POST-MORTEM EXAMINATION.

The Autopsy revealed the following facts: The lungs exhibited traces of old disease; the right lung was adherent to the ribs throughout, requiring considerable force to effect a separation. On making sections of it, several portions of this lung presented a carnified condition. Left lung healthy.

The Pericardium contained an inordinate quantity of serous fluid. The heart was much enlarged; the left side preponderating over the right. The walls of the right were remarkably thin and flabby; the walls of the left side, although somewhat thicker, were yet abnormal in this respect. The *spleen* was greatly enlarged, weighing 3 3-4 lbs.

On making sections of it, the superior portion presented a mass of black grumous blood, and like the lung, it was in a complete carnified condition. In the lower portion, the blood was not so dark, neither was there the same solidity of structure.

The liver was much enlarged, and fatty; the kidneys were somewhat enlarged, but soft and flabby.

The mesentery was the seat of a large amount of disease; beneath the transverse portion of the colon, and nearly in the centre of the bowels, appeared a large indurated *tumor*, which exhibited a general aspect of scirrhous; subsequent, and more thorough examination, has shown that this mass consisted of a congeries of tumors of *medullary* cancer, in a state of considerable condensation—more nearly resembling in texture vulcanized India Rubber.

Throughout its entire extent, the mesentery unfolded an immense mass of these apparently cancerous tumors, of all sizes, varying from a pin's head to *two inches* in diameter, as shown in Fig. 1.

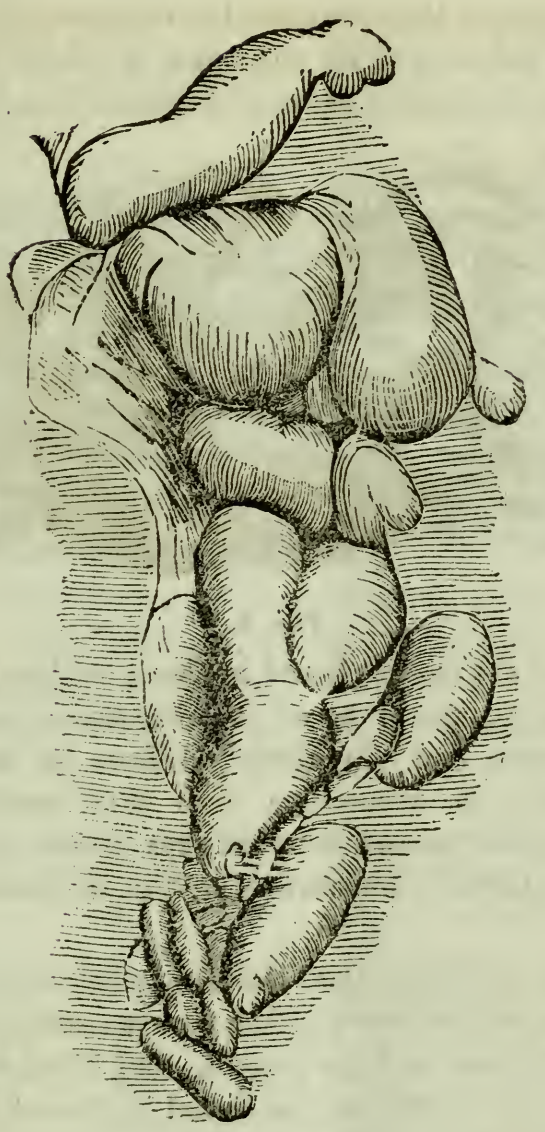


Fig. 1.

From the duodenum, down to the rectum, the mesenteric margin of the intestines, was occupied by conglomerate masses of such tumors. The outer surfaces of the colon and rectum from the ileo cœcal valve, downwards, amongst and between, the appendices epiploicæ, consisted of an aggregation of such growths. Upon opening the intestines, to ascertain how far the mucous membrane was implicated in the disease, a curious fact was observed. The lowest portion of the rectum, exhibited many patches of minute, densely aggregated, scirrhous tumors. In ascending towards the colon, they greatly increased in number, and the patches were of larger size. Throughout

this latter intestine, they continued to increase, till they reached the ileo cœcal valve; and for the space of twelve inches below this point, one continuous patch of scirrhous tumors was visible.

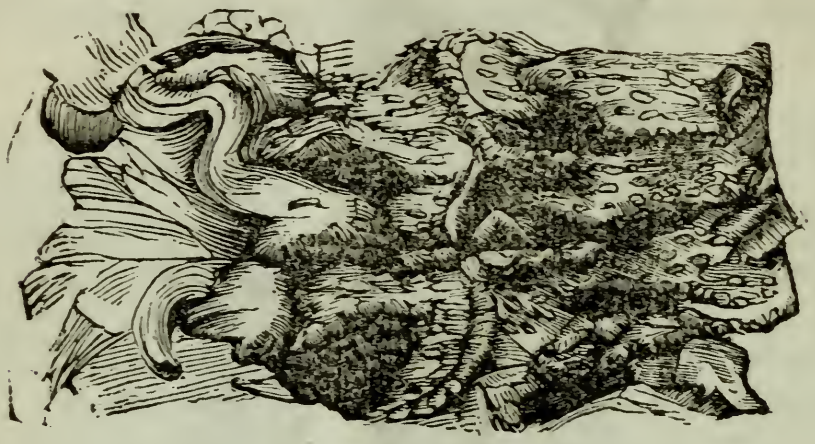


Fig. 2.

The whole of the tumors found in the intestines, were strictly compound; being made up of rounded bodies, about as large as a millet seed, and singularly uniform in size. Another remarkable fact in connection with this manifestation of disease is, that the tumors were always found upon the free margins of the *valvulæ conniventes*, and in no instance between them.

On entering the ileum, from the ileo-cœcal valve, like tumors were found sparcely scattered on the mucous surface of this intestine, for about one inch in length, and from this point no further exhibition of disease was found in the remainder of the small intestines, or the stomach.

From the history of this case, as communicated by Dr. Lauderdale, it appears that the patient complained of suffering from *hemorrhoides*; moreover he experienced daily suffering in the region of the lower bowels two or three hours after taking food. We can have no doubt that his sufferings were solely due to the amazing number of scirrhous tumors, which covered the mucous membrane of the *intestines*. The medullary cancers, (if such they were) on the contrary, may strictly be regarded as harmless; they never appeared at any time to have yielded under any circumstances the slightest testimony of their existence. The large indurated mass of aggregated tumors occupy-

ing the central portion of the intestines, could be distinctly felt through the parieties of the abdomen, and pressure upon it produced pain.

It will be hereafter seen, that the microscope distinctly points to incipient degeneracy in the tumors composing this mass.

So, too, pressure upon the *transverse colon* produced pain, and the tumors found upon its internal surface, were also in a state of considerable degeneracy.

It is consistent with what we have seen of cancer, that it may, and frequently does exist, to a very large extent, without inflicting the least inconvenience; and that it is only when it takes on a degenerate condition, that it is to be regarded as a formidable, and malignant disease.

In all forms of cancer we may have an *active* condition manifested, by which is meant, a great capability of propagation, which of itself is not necessarily malignant.

Degeneracy can only be discerned when the degradation has progressed so far as to result in ulceration, or by the assistance of the microscope.

On examining these tumors microscopically, the cells of the medullary cancer, (if such they ought to be called,) are remarkable for their general uniformity of size: *a. a.* 3 designates cells almost circular, and these formed by far the majority of the corpuscles. The exceptions of irregularly formed cells, were very few; they are shown at *b b b.* On comparing the medullary tumor with a messenteric gland, very great similarity is found to exist, as shown in Fig. 4, *a a.*

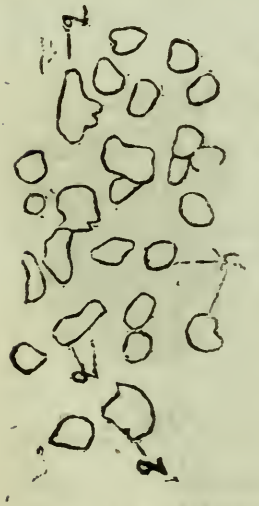


Fig. 3.

These represent two groups of cells, in which much uniformity in size, and form, exists. The exceptions of irregularity of form, are seen at *b b.* The messenteric gland in question, was selected from a group, all of which were apparently healthy.

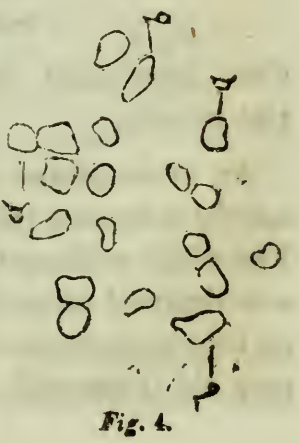


Fig. 4.

They were neither enlarged in size, nor altered in color. The corpuscles so closely

resemble those of the medullary cancer, that the presumption seems to be that they were either both *normal*, or both diseased.

We believe they were the former, and take this as the proof, that no degeneracy had yet occurred to these medullary tumors, and it is on this ground that we chiefly claim for them a harmless character, a fact confirmed by the history of the case.

Another fact, however, of still greater importance, resulted from the microscopical examination of the tumors, of the so called medullary cancer, inasmuch as it is exceedingly doubtful whether it be correct to give these tumors this designation. Two tumors were examined, one of the smallest kind, the other two inches in diameter, with precisely the same results.

They prove to be nothing more nor less, than lumps of *fibrillated fibrin*. To see this structure, it is necessary to make sections, not exceeding the one thousandth of an inch in substance, and then the fibres will be seen crossing each other in every direction. In addition to the fibres of fibrin, the meshes or interstices of the fibres were filled with the corpuscles already figured and described.

This fact will be best shown by reference to the illustration, Fig. 5.

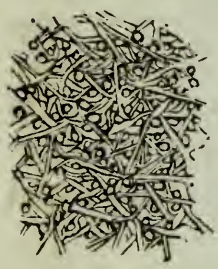


Fig. 5.

This gives a view of the fibrillation of fibrin of the *membrana putaminis* — the lining membrane of the egg-shell. It is introduced to show the arrangement of these fibres in a natural membrane, and the remarkable agreement subsisting between these two tissues.

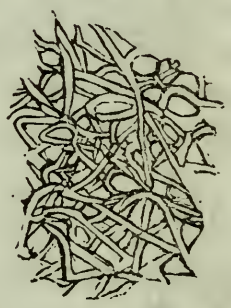


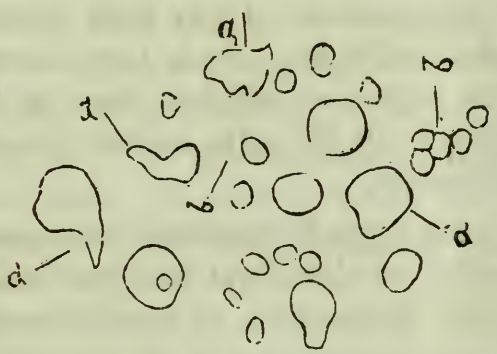
Fig. 6.

An attempt was made to inject the stomach and bowels, with special reference to the mesentery, and the disease located there. The whole of these tumors remained uninjected, and the attempt was renewed after the intestines were removed, by pipes inserted into mesenteric vessels, contiguous to the tumors, but in no case did it succeed. The truth therefore became apparent, that

they were not vascular tumors, a fact which the microscopical examination of them fully confirmed.

It will be seen that there is a great discrepancy in the size of the fibrilated fibers of the membrana putaminis, and those of the tumors. (*Fig.*6) The explanation will be found in the fact that the corpuscles of blood in the fowl are very much larger than the corpuscles in man.

On examining those which composed the hard indurated central mass, a number of well-defined *caudate cells* were found, and are indicated by the letters *a a*, *Fig.* 7. *b. b.* shows groups of cells of normal regularity of size, thereby indicating that the degeneracy was partial. In the scirrhous tumors again we came in contact with *caudate cells* of various forms and sizes, all which are represented by letters *a*, *Fig.* 8.



(Fig. 7.)

In examining the remainder of the cells of this tumor, it will be seen that there is a greater abscence of regularity in this instance than in those that have preceeded it; moreover, they are all minute.

(Fig. 8.)

It will readily be perceived that we venture to assume that well-formed cells, uniform in size and character, are indicative of a normal type of organization, and that any departure in this respect, is more or less the manifestation of degeneracy; consequently, caudate cells indicate a downward tendency, or a state of degeneration from a normal type in the tumor in which they are found.

Like other writers on this subject, we too have found it necessary to speak of *caudate cells*, and it so happened that we found them in two distinct forms of cancer in this case.

It might lead to the inference that these peculiar cells are characteristic of some or other form of cancerous disease, more

especially, as so much has been written concerning them, all tending to this conclusion. But the contrary is really the fact, the cells being found only occasionally, and not by any means, as a rule.

Those who have had much experience in the application of the microscope to the examination of morbid structures, know perfectly well that *caudate cells*, are not the necessary concomitants of any form of cancer. They know, moreover, that this disease presents so many forms of cells, that they are rarely twice alike, and no one shape or form has yet been seen, which can be claimed as typical or characteristic of any kind of cancerous disease. When caudate cells are found, they change their form so rapidly as not to remain a sufficient time to be figured, and this remark applies to all the cells, no less of scirrhous than to other kindred diseases.

The field of view under the microscope is constantly changing, and whether these peculiar cells owe their form to a particular stage of degeneracy in the cells themselves, or merely result from a change of shape, to which in common with all other cells they are liable, is yet to be determined.

The application of the microscope in the examination of normal tissues, is of immense importance; but for Pathology it as yet has done but very little that is reliable, and ere it can do more, our knowledge of cells and the changes from a normal character to an abnormal condition to which they are prone, must be greatly extended.

H. G.

ARTICLE V.—*A case of Hydrocephalus in Labor.*

It is believed there are but few medical men who, having been long engaged in practice, have not met a greater or less number of cases, in the various departments of our profession, which, if made public, would scarcely fail to enlarge the sphere. both of scientific and practical knowledge. Unique or singularly complicated forms of disease, succinctly stated, and associated with explanations of attendant circumstances; or theories, even, by which is meant the rationale of such circumstances elabora-

ted while yet the essential facts are vividly present to the mind of the observer, may serve as beacons, in times of anxiety and danger.

Thus it is that the mariner, having by previous study of his maps and charts, thoroughly impressed upon his mind the precise location of rocks and shoals, or referring to them in emergent circumstances, is enabled to conduct his tempest-tossed vessel in safety to the destined haven.

If the following case, presenting some remarkable features, with the accompanying observations, shall produce the same lively interest in the minds of others which they did in our own; if they shall call to the recollection of any senior member of the profession—renewing with a vividness approximating the reality—similar events in his own experience, or aid a junior brother in the performance of his duty, in circumstances of like solicitude, or impress either as forcibly with the weight of responsibility imposed upon its votaries by our science, then the writer will have no occasion to regret having treasured the facts and offered them to the world.

Mrs. B., aged about 36, was brought to confinement of her fifth child, on the 29th of May. Residing some miles from town, a mid wife of considerable experience was called, who remained with her until she was finally delivered.

The patient was of large and well developed frame, remarkably expanded pelvis, and excellent general health. Early on the morning of the 31st, we were summoned to visit her as quickly as possible; the messenger at the same time urging as an argument that we ought to make no delay, because the patient was in a most dangerous condition, inasmuch as the child, save its head, had been born since about sundown the preceding day—the 30th.

Thus it will be perceived, the case had been prolonged over a period of about forty-eight hours, and not far from twelve hours had elapsed since the expulsion of the body of the child.

Not a little sceptical as to the truth of the account given by the messenger, after providing instruments and such other appliances as it was reasonable to suppose might be required, no time was lost in making our way to the bedside of the suf-

fering and anxious patient. Contrary to expectation, we found the facts to have been faithfully and accurately stated. The child was indeed "born, save the head." On enquiry, the midwife said, that "the patient had been *'awful sick';*' the pains had been rapid and severe; the waters broke about noon on the 29th, when, after having been greatly embarassed to determine the presenting part, the breech began to descend, and, after severe and protracted efforts, at about sundown, as before stated, the body was delivered. There had been no untoward symptom; the case had progressed regularly, but slowly.

The child was of unusual dimensions, the body plump and well developed.

It is worthy of remark that, notwithstanding the protracted character of the case, the intensity of suffering, and further, though the pains *were still severe,* with regular and well marked intervals, yet they were not accompanied with the extreme restlessness alleged by some obstetricians (especially by Ramsbotham) to be strikingly characteristic of cases of this kind. In truth we may say, it has not fallen to our lot to witness an extraordinary degree of restlesness in this form of complication, nor have we met with examples of the injury to the soft parts within the pelvis, so emphatically portrayed by that learned author.

Our first impression was, that the protracted delay arose from the *ignorance of the midwife,* and hence that we, on trial of *our superior knowledge and skill,* should be able to deliver at once. Our disappointment and chagrin will be readily inferred, when on trial of all the manipulations, to which we had been accustomed to resort, with as much tractile power as we deemed prudent to use, we had accomplished nothing. Foiled and embarrassed, the question, what is the difficulty—the cause of failure, in a word, the complication, immediately presented itself.

On revolving the probabilities, our thoughts were directed to some malformation or diseased condition of the fœtal head, vastly enlarging its dimensions and therefore presenting an insuperable barrier to delivery. What other conclusion was plausible? Could adhesion of the scalp to the uterus, be justly predicated ? This seemed inadmissable, as did also every other

impression as to the probable condition of the parts, except that above indicated, viz: malformation, or disease of the head. Reasoning thus, without loss of time, we set about exploring with a view, if possible, of confirming or disproving the impression with which we were so strongly imbued, a work not easily accomplished under so much suffering on the part of our patient.

The ultimatum arrived at was—inasmuch as the base of the cranium, as ascertained by the index, was manifestly of much greater breadth than pertains in a normal condition of the fœtal head, and as there was remarkable softness and flaccidity of all the parts within reach, indicating defective ossification—that the case was Hydrocephalous.

This conclusion was not indulged without some misgivings, and yet it was adopted with sufficient decision to determine our practice.

The plan which we proposed to pursue was the following, viz: to seek some point in the base of the skull, at which to insert the *crotchet*, that would afford sufficient firmness to sustain any degree of force we might feel warranted to employ, and at the same time, if our prognosis should be found accurate, give ready exit to the contained fluid. We regret that we did not provide a receptacle for the fluid, that its actual quantity might be definitely known. Fortunately, we were enabled to insert the instrument, over the imperfectly formed petrous portion of the temporal bone of the right side, the immediate consequence of which was, the discharge of an immense quantity of perfectly limpid fluid; complete collapse of the head, and, with scarcely an effort on our part, delivery. The placenta was readily cast off, the uterus contracted satisfactorily, there was no flooding beyond what is common in the majority of the most favorable cases, and our patient recovered without a single untoward symptom.

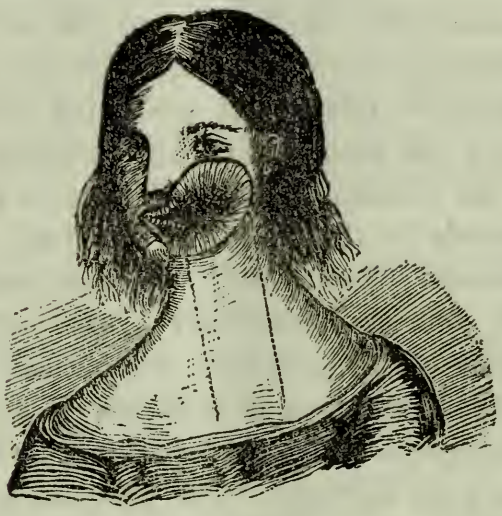
It is impossible for us to state with accuracy the quantity of fluid discharged; we can only say that it exceeded by far any quantity we could reasonably have supposed.

The head presented the aspect of a vast sac, and the scalp was covered with an abundant growth of long black hair.

On opening the cranium, our attention was first directed to the condition of the brain, which it was found difficult distinctly to recognize. A close examination, however, demonstrated the fact that it had taken the form of the sacculated head, as if intended as a lining for the cavity.

Its substance was unusually firm; it was singularly smooth and shining, and utterly destitute of processes, ventricles, or distinctive characters, of *cerebrum* or *cerebellum*.

The *dura mater*, if indeed it *could be* distinguished, was equally destitute of its appropriate anatomical characters. The bones of the cranium, or rather what should have been bones, with the exception of the thicker portions of the *occiput* around the *foramen magnum*, and the petrous portions of the temporal bone, were nothing more than thin and imperfectly developed cartilages. **E. K.**



ARTICLE VI.—*Plastic Operation.* By E. M. CLARK, M. D.

The folloiwng case is presented in confirmation of well-established principles of surgery, and additional testimony to the availability of our art, in the cure of deformities, by the restoration of parts.

Miss S., aged 13, had suffered the loss of her left cheek, which was destroyed by *cancrum oris*. The skin, cellular tissue, and

muscles were involved; leaving the side of the face open, as seen in the wood cut.

About one-fourth of the upper and lower lips were destroyed; the edge of the lower lip was drawn down to the base of the jaw, and the lower edge of the upper lip drawn up to the *ala nasi.* She was obliged to wear a pad fitted to the opening to prevent the escape of food in taking her meals. Her jaw was immovable.

OPERATION.

The projecting teeth were first extracted, except one which could not be removed. The edges of the cicatrix were dissected from the bones, and abraded.

The lips were loosened from the maxillæ above and below, and fixed in their position by a pin and ligature. The space to be filled was of a quadrangular form, extending from the ala of the nose to the lobe of the ear, and from the base of the inferior maxillary bone, to within half an inch of the tarsal edge of the lower eyelid. Her neck was very thin.

An incision was made, extending from the inferior and posterior space to be filled, directly downwards, to a point, an inch below the clavicle, and another from the anterior and inferior angle of the same space downwards to about the same distance below the clavicle, as shown in the cut.

This flap was raised, the head tipped rather forcibly downward, and the upper margin of the flap brought in apposition with the upper boundary of the vacant space, and united thereto by the interrupted suture.

The latteral margins, thus brought in apposite relation with the latteral boundaries of the vacant space, were also united by suture. Union by the first intention took place throughout the whole extent, except about two lines from the edge of the lower lip. Irritation caused by the broken tooth, produced sloughing of the flap over it; this was afterwards closed by Drs. Gorham and McNaughton.

The original intention was after adhesion had taken place, to divide the lower end of the flap, but the elasticity of its tissues rendered it unnecessary.

It was only requisite to apply straps and compress to procure adhesion throughout its entire length.

Thus an unsightly deformity with its attendant inconveniences was effectually corrected.

SPIRIT OF THE MEDICAL PRESS.

Observations on Scarlatina. By Henry Tweedy, M. D.

There is no lack at present of able and useful contributions to our medical and surgical literature, but all must admit that it is of the first importance that practical men (many of whom have neither time nor taste for writing learned or lengthened essays) should be encouraged in every possible way to write as briefly and plainly as they please upon points of practice not generally adopted, and the correctness of which has been proved in perhaps hundreds of unpublished cases.

The following observations upon scarlatina shall be confined to three points of practice:

1. Early Purgatives.
2. Cold Drinks.
3. The Application of Nitrate of Silver.

I have had extensive opportunity of witnessing and treating eruptive diseases when on different occasions they severally assumed the form of an epidemic in Dublin. Of Scarlatina, which is justly considered the most formidable, I do in truth declare that, to the best of my belief, not a single case, for the last ten years, proved fatal of those which I had seen within twenty-four hours of the commencement of the attack, and which had not previously been put under treatment. Humanly speaking, the cause of such success has been that I have long held in deep abhorance an *early* aperient in *any* form of eruptive disease. I state it advisedly as my opinion, and one not hastily formed, that a smart purgative draught is in itself sufficient to convert a case of mild scarlatina into a malignant, and, in all probability, a fatal one. To my mind it is not difficult to assign a reason as to how and why this should be so.

The primary stage of every disease, whether medical or sur-

gical, is inflammatory, and this supposes the diminution — in some instances, the almost entire suspension — of all the secretions. The mucous membrane, which in health are always moist, become in the early stage of fever, more especially the eruptive fevers, dry, rough and parched. An irritating purgative which, in hundreds of cases, from the ground work of the treatment, increases considerably this state of things, and therefore should by all means be avoided; whereas medicines which tend to relieve the skin, subdue the fever, and restore the secretions, will, in almost every instance, cause the bowels to act freely and naturally. Should such fail to be the case, a mild aperient, about the conclusion of the third day, will seldom fail to accomplish all the indications required.

I consider this point one of great practical importance, involving the lives of many of our fellow creatures. I have for years felt it my duty to warn parents, guardians, and proprietors of schools, &c., against the objectionable and most dangerous practice so often adopted, of giving aperient medicines during the prevalence of any epidemic. They have, to say the least of them, in numerous cases, done irreparable harm, lessening considerably, if not altogether destroying, all hopes of a good and complete recovery.

I cannot say that in one solitary case for the last ten years I ever ordered a particle of aperient medicine before the eruption was not fully and fairly established, but further, beginning to decline; and I do positively assert that I never had cause to regret it. The bowels have, in many cases, been most satisfactorily relieved by medicines given with a totally different object, and in all, the patients did well.

The medicine of all others on which I rely most, and the efficacy of which, in many disaases, is far greater than is generally known is ipecacuanha. For a strong robust child of 10 or 12 years of age, I should order the following mixture.

R Aq. distil. oz. vii.
Pulv. ipecac. gr. vi.
Syrupi croci oz. j. M.

One tablespoonful to be taken every second hour. The dose of the medicine should be increased or diminished in proportion to the age of the patient and the effect produced.

Cold Drinks.—In connection with eruptive and inflammatory fevers generally, it may be well to mention that the objection entertained by many to cold water as a drink is, in my opinion, wholly untenable. I cannot possibly say in how many cases of scarlatina, measles, and other eruptive diseases, whether in adult or child, I have given the attendants full permission to give the patients cold water to any extent desired by them.

Suffice it to say, that for at least ten years it has been, with perhaps one or two exceptions, my invariable rule. I am thankful to say, that not a solitary case has occured which has caused me to regret it. On the contrary, it has always proved not only safe, but, in my opinion, the most useful, and certainly the most agreeable drink I could possibly employ.

While strongly advocating the propriety of giving patients as much cold water as they could possibly desire during the inflammatory stage of fever, I am not prepared to say that I should *order* every (or any) patient to drink quantities of this fluid against his will: quite the contrary. There are to be found some, especially in the upper ranks of life (I do not think I ever saw one in the lower), who, whether in sickness or in health, have an intolerable aversion to cold water as a drink. I have before my mind the names of some such, who have repeatedly acknowledged to me that never in their lives did they drink one glass of plain cold water at a time. With such I did not press the remedy, and each did well taking large quantities of warm drinks to assuage their intolerable thirst.

As there are physicians favorable to early purgatives, so there are those hostile to cold drinks in the first stage of eruptive fevers. My observation of the effects of both remedies in a large number of cases has led to the following conclusions:

1st. A case may occur in which a purgative might be called for as the foundation of treatment in early fever, but I must ever maintain that such case is the exception, and not the rule.

2d. Cases may and do occur, in which early purgatives in fever do no apparent mischief; on the contrary, the patients progress satisfactorily.

3d. Constant observation forces upon me the conviction, that most serious consequences are produced by purgatives in the early stage of eruptive diseases, eventuating in the most startling results, which, in my opinion, might have been avoided by other and milder treatment.

4th. The choice of warm whey, &c., or cold water, may safely be left with the patient. In nineteen cases out of twenty, the latter will be preferred. Gratifying the patient in the matter has never disappointed me.

Nitrate of Silver.—The third consideration with reference to scarlatina, which I desire briefly to advert to, is the application of Nitrate of Silver to the Fauces.

I believe no physician doubts the efficacy of this remedy, but certain I am that many practitioners might nearly, if not altogether, as well neglect this most useful and powerful agent, as to use it as they do. There are many who never apply nitrate of silver to the throat in any other way than by means of a

camel's hair pencil. Now, nothing could shake me in my conviction, that hundreds of cases of scarlatina had proved fatal from this cause alone. I have seen ulcerated sore throats, as severe perhaps as any which the records of medicine can afford, and which had brought the patients suffering from them to the very confines of the grave. Had I nothing better at hand than a camel's-hair pencil for applying a caustic solution, to a moral certainty they would all have terminated fatally.

The right mode in my judgment, for employing this great (I might say only) remedy in this extreme case, in which life is all but extinct, is to get a long probe, around which should be rolled a piece of lint. This should be allowed to stand for about one minute in a twenty-grain solution of nitrate of silver. A spatula or spoon having been placed on the tongue to depress it, the probe should be passed low down into the throat, the interior of which should be cleverly rubbed all around. Those who have practised this in the way described have had their hearts gladdened by the wondrous change in a moment produced. A sponge attached to a rod of whalebone has been used and recommended by many. This, though infinitely preferable to a camel's-hair pencil, is open to objections:—1st. The same sponge should not be used (though I have often seen it done) for more than one patient, and we often meet with two, three, and even more at the same time, and in the same house. 2d. There is a difficulty in having the sponge kept clean. 3d. The sponge is ten times more disagreeable to the patient; and, lastly, it does not answer the purpose so well.

I know of no disease, the recoveries from which have astonished and rejoiced me so much as scarlatina. No case should be despaired of, or left without the most vigilant care, until life becomes wholly and unmistakably extinct. I feel perfectly satisfied that there are many practitioners who have reason (upon a review of past experience of this disease above all others) bitterly to regret the course they pursued. Like croup, it runs through its stages quickly. To neglect proper treatment, and that at the right moment, or to employ injurious means is an error never to be remedied.

Some time since I was attending a fine boy, aged seven years, in Mountjoy-square. He labored under malignant scarlatina. The case was one demanding the utmost care and attention, it being as unpromising—I may perhaps say as hopeless—a case as I had ever seen. Having had occasion to pass the house at a very late hour of the night, I paid my little patient an unexpected visit. The person who opened the hall-door, announced to me her belief that the child was dead. On entering the room I beheld the mournful sight of a fond father with what he con-

sidered to be his dead son lying on his lap. The scene was not one soon to be forgotten. On a very close examination, I could clearly perceive that the child was still alive, but no more. One drop of fluid he could not swallow, and his respiration was almost imperceptable. I instantly applied the nitrate of silver in the manner I have described; not, I must say, with much (if any) expectation of success. The effect was literally miraculous. An immense quantity of mucus and lymph adhered to the lint; he immediately breathed freely, before I left the house drank cold water, and in the providence of God made a quick and complete recovery.

This is a case of peculiar interest, pointing out distinctly two important points—viz: 1st. The extreme value of nitrate of silver when properly used. 2d. The physician's duty in never turning his back upon his patients, and saying no more can be done, so long as the smallest appearance of life remains.

A short time since I attended a family in North Richmond street, who have suffered severely from scarlatina. The mother took the disease from her children, four or five of whom were ill together. With the exception of one, the cases, though far from being mild, were not alarmingly severe. In the eldest, a handsome girl, about eleven years of age, the disease assumed a malignant type. On the night of the fourth or fifth day, I was sent for in great haste, and was informed by the messenger that my patient was dying. On entering the room I had good reason for fearing that what I had heard was but too true. Her face was absolutely purple; her respiration so painfully difficult that she required to be propped up with pillows in her bed; an intelligible word she could not utter, and swallowing was quite out of the question. I lost not a moment in applying the caustic solution, as in the last case mentioned, and with similar and eqally happy results. Her recovery was everything that could be desired, and she is now, I am thankful to say, a healthy young lady, full of life and spirits.

I do not presume to say that the man who adopts the foregoing treatment must necessarily succeed in every or in any case; but this much I must say, that in my experience it has proved successful, and I confidently believe that none who adhere to it will have reason to regret it.—*Dublin Medical Press.*

On the Communication of Syphilis by Vaccine Lymph.—The question of the influence of syphilis upon vaccination is one of importance; the opinion is very wide spread among the laity, that vaccine lymph taken from an unhealthy child generates disease. A case in point has lately occurred in Bamberg, a town in Bavaria, where a medical man was condemned to two years'

imprisonment for having vaccinated several children from a child exhibiting a syphilitic eruption on its face and body. The witnesses asserted that the vaccine pustules had not been properly developed, and were followed by tedious ulcerations. Moreover, nine grown-up persons were asserted to be reinfected by the children tainted through the vaccine pustule. The judgment was commuted in consequence of the opinions expressed by Messrs. Heyfelder and Pauli, two distinguished medical men of Rhenish Bavaria, whose judgment has been supported by that of Ricord and Cullerier, who utterly deny the possibility of communication of the syphilitic poison by the agency of vaccine lymph. Cullerier, according to the *Bulletin de Therapeutique*, from which we extract these facts, states that he has not only vaccinated syphilitic children without ever seeing the vaccine in any way modified by the syphilitic diathesis, but that he has vaccinated healthy children from syphilitic infants without ever perceiving the slightest unpleasant results. The Societe de Chiurgie, through their reporter, M. Brocas, have pronounced absolutely in favor of the views of Messrs. Ricord and Cullerier.—*B. & F. Med. Chirurg. Rev.*, Oct., 1855, from *Bull. Gen. de Therap.*, July, 1855.

Biography of Living Medical Men.—Almost all *great* men, at some period of their mundane existence, ardently desire to embalm the elements of their *greatness*, in unfading ink, on the pages of biographical history. Now to what extent this desire should be gratified, is a *grave* question, and, therefore, ought to be referred to *literary undertakers*. But some, less *Barnumized* than others, are too modest to unfold the details of their lives while living, and in the marvelous increase of *great* men, perchance many disappear without leaving for the world a single line to show in what their greatness consisted.

The "Prince of Humbugs," a man who can astonish the world with prodigies, may, with a good show of reason, present, among the rest, his biographical memoir! The "itinerant quack," and vender of patent nostrums, may, with equal propriety, when purchasing whole columns of newspaper puffs, insert his biographical portrait! Such a brazen exhibition of self-conceit would undoubtedly sell more of his compound, and his patrons, perhaps, would be the better SOLD.

Political demagogues, too, who pull every wire, by hook or by crook, to reach the topmost seat of their ambition, may furnish their *written lives*, accompanied by a lithographic likeness, setting forth the lineaments of greatness in a high forehead, a penetrating eye, and well chiseled features, (*for all these, if*

not possessed can be purchased.) Such a class of aspirants for riches and worldly renown, invent means best adapted and in keeping with their pursuits.

But may we not discover at the present time, in the medical profession, as it were the copyright of this illegitimate appeal to public favor? If this be true, if medical men while living, and before they have reached the meridian of professional distinction, suffer their lives to be *advertised* in biographical memoir, ought it not to be looked upon with distrust and suspicion, rather than envy? Nay, more! ought it not to be regarded, by every man true to the interests of the profession, as an *epitaph* on the *tombstone* of their professional character?

In these days when the public mind seems more than ever credulous and eager to embrace and cherish the shadow rather than the substance, it is time to draw the line of demarkation between the true character of science and the pretensions of the *Charlatan*, so that it cannot be overlooked or mistaken.

Some there are who reach a respectable eminence in the profession, and who, for their attainments and contributions to the progress of science, merit the esteem and fraternal regard of professional brethren, but in an hour of temptation, ill fortune and sordid motives, quit-claim their birth-right; they prove recreant to time-honored principles of professional decorum, and soon find their level among the fraternity of empirics.

If the profession is to be kept unspotted from the stigma of quackery, it must avoid even the appearance of its approval.

Biography of eminent men is of interest to the reader just in proportion to the degree of eminence to which they have attained. This is true of all such writings, but especially does it obtain with regard to the medical profession.

When the toil of life is ended, and the elements of greatness have ceased to develope and unfold on earth, it is time enough to gather and trace those elements from their birth in all their detail. I would not expunge biography from medical literature, but preserve it inviolate, and "*sacred to the memory of the* DEAD."

Like the evergreen and myrtle, that mark the spot where the dust returned to the labaratory of earth, so let biographical literature keep ever fresh the memories of the *truly* great and good. The medical profession claims enough, when it takes the body for scientific research; but with shame be it said, that some have even robbed the sepulchre of its literature, flattered by the hope of reaching distinction "by climbing up some other way." They have debased a *sacred* literature to the execrable purposes of sordid ambition.

Biographical memoirs of the living, to be complete, should append an *obituary notice* of the subject. Then curiosity, as well as vanity, would be gratified to the last degree.

How many of those, who—comparatively obscure members of the profession,—are devoting untiring energy, and marked ability, in large fields of labor, gathering rich stores of experience, esteemed, respected and beloved by a large circle of friends, and who would be able to flood our medical journals with a simple history of where they were born, whether second or third sons, who their father was, whether born in a LOG house, or a frame house, painted red. Whether nature had endowed them with a spare frame or one capable of great physical power and endurance. Where they received an academic education, or what *M. D.* gave them office instruction. Whether rigid economy compelled them to live on roast potatoes, pudding and milk, &c., &c. Where they were married, when elected delegate to some county medical society, or chairman of a village debating club; and a thousand other trivial incidents in the life of every physician which are common to many others.

Is it not fortunate for our medical literature that the profession, as a whole, are modest enough to permit their "biographical memoirs" to remain unwritten, or at least to rest quietly in their diaries? Otherwise biographies of living medical men would vie in number with our yellow covered novels, and *eminent* men would multiply in proportion.

When rightly considered, auto-biography of medical men, or sketches of biographical memoir, published to the world, while the subjects thereof are living, whether they chance to be scientific professors in medical colleges, or modest unassuming country practioners, is a *gross violation* of Sec. 3d in the code of Medical Ethics adopted by the National Medical Association, and therefore is as reprehensible and odious as any other can be. In Chapter 2d, Article 1st. we have the following section:

Sec. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor, gratis; or promising radical cures and remedies *to adduce certificates of skill* and success, *or to perform any similar acts.* These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

In a biographical memoir now before me (in the New Jersey Medical Reporter, for May, 1855,) the subject of which, at latest dates was living, we extract the following:

"As a physician it is no unjust praise to say, that he is universally beloved and esteemed by those who come under his care, inspiring in them confidence and hope, and meeting them with an encouraging smile and a remark oftentimes, more effective for good, than the most potent anodyne. In his diagnosis of disease he is minute, careful and searching: equalled only by

the skill and sound judgment which he exhibits in their treatment. In emergencies requiring self-possession and prompt action, he is calm, deliberate, and efficient, exhibiting a ready command of resources, *which few, under like circumstances, possess.* These attributes have secured for him in a remarkable degree, the confidence of his professional brethren and of the community in which he lives."

Now whether all this be true, or whether it be exaggerated, are questions altogether irrelevant. This portrait may be a good one, its lights and shades well spread; but in the name of all that is modest and of good report, and the law of medical ethics, is it the proper time to hold it up to the public gaze? It is not a violation of the spirit and clearly expressed intention of sec. 3d of our orthodox code? Would it not have sounded better if written as a tribute to some veteran of the profession who had "passed away," and whose attributes and characteristics we would love to cherish? On the contrary, the subject of this memoir is still a candidate for public favor and patronage, and, moreover, in all probability approves of that very medical code adopted by the National Medical Association, and denounces even the *appearance* of quackery.

What better advertisment would an itinerant empric ask than his biographical memoir, setting forth his claim to public favor and patronage on the ground of his ability to treat diseases *with extraordinary success?*

It is, then, a dangerous precedent, appearing in the garb of dignity commensurate with the character of *true science:* while in reality it is but the vesture of of a mountebank.

If medical men are an honor to their profession while living, and are worthy the immortality of biographical literature, they may rest from their labors in "the sleep of death," but like Hunter and Cooper, they will "*still live.*"—*Buffalo Med. Jour.*

R*******

DETROIT, Oct. 1855.

Precedents in French Law respecting certain Rights of Medical Men.—A case was lately tried at Orleans which offers a good proof how much regard the French law and the French courts pay to the rights of medical men in cases where the patient dies, and the goods are sold. In the case tried at Orleans, M. Vallet, senior surgeon to the hospital of that city, had attended a lady who died, and left furniture, &c., and which was given up by the heirs. It was to be decided whether the owner of the house, or the doctor, was to come in first as to payment, the court ruled that the *doctor came first.*—*London Lancet.*

The Mastodon Giganteus.—In 1852 I sent to the annals of natural history an account of the exhumation of some Mammoth bones in cutting through the drift at the head of Burlington Bay when forming the Great Western Railroad. This, I believe was the first notice of the finding of the remains of any of the large extinct Proboscidians within the limits of this Upper Province; and I believe I am again to be the first to record the discovery of fragments of an individual of the allied genus Mastodon which I apprehend to be of the species most common in North America, the Mastodon *Giganteus.*

When at Niagara Falls last autumn my attention was called to some fossil bones in Barnett's museum. They consisted of a beautifully perfected lower jaw, one perfect vertebra, some others, and a rib partially destroyed by fire in consequence of having been thrown on a log heap when clearing the land. I had been in hopes of visiting the spot where they were found before publishing this notice, but having been unable to do so, I will give Mr. Barnett's own description of the locality:

"The jaw and other remains of the animal were dug up at a farm adjoining that of Mr. Hugh Shanon in the township of Southfield, district of London, C. W., on the 13th Nov., 1854.

"Where the bones were found in a swale of blackish peat two or three feet deep, beneath is a whitish grey clay. The bones had not been forced into the clay more than their weight had sunk them when the clay was in a soft state.'

The single incisor in the lower jaw which Prof. Owen gives as a distinguishing mark of the M. Giganteus is beautifully preserved, the tip is worn and polished by the continued friction of the trunk; it does not seem to have protruded far beyond the integuments; the length of the tooth beyond the bone is about five inches.

The bones can be seen in Barnett's museum.—T. J. C.—*Canadian Journal.*

Woodstock, Dec., 1855.

Bromide of Potassium in Spermatorrhœa.—One of the editors of this Journal has recently been using the *Bromide of Potassium* in Spermatorrhœa, with happy effects. He exhibits it in doses of four grains, in solution, three or four times in twenty-four hours. It was conjoined with the use of cold water injections into the rectum, so as to empty it. A light vegetable diet was also directed. The result, in all cases of its use, was satisfactory.—*Cincinnati Med. Observer.*

Chloroform in Surgical Operations, the cases in which it should not be applied. By Mr. Coulson.

Mr. Coulson, in a discussion at the Medical Society of London, October 13th last, said, that all surgeons in large practice must have employed this agent a great number of times, and experience has enabled them to determine several points about which there can be, he thought, no question any longer. In the first place, it may be considered settled that chloroform is a better anæsthetic agent than ether. It may also be regarded as a settled point, that the administration of chloroform is not attended with a sufficient amount of danger to justify, as some think, its rejection altogether. On the other hand, he would not go so far as to say that its use, even with every precaution which science can suggest, is totally devoid of danger. Persons enjoying good health have poisoned themselves with chloroform. Every now and then its administration proves fatal, and no reason can be assigned. But this can be said—for many thousand cases justify the conclusion—that the danger is infinitely small to the advantages gained. The danger, however, exists; hence, he should like to see a third point accepted—viz: that chloroform should not be administered on light occasions, or for trifling ailments, and, above all, that it should not be used except under the superintendence of a competent person. The physiological effect of the agent point out at once the vast range of cases in which it may be employed with benefit. To these he should not allude; but for the present notice a few cases in which, according to his experience, chloroform should not be used. Surgeons are not entirely agreed on these, and it seems more useful to discuss a few doubtful points than to dilate on measures about which no difference of opinion exists. The annihilation of pain is the grand victory of chloroform; but, it may be asked, is it always desirable to suspend sensation during surgical operations? He (Mr. Coulson) should say not always. In some rare cases, the feelings of the patient are a useful guide to the surgeon; hence, in these cases, sensation should not be abolished. This is the principle which should be adopted. As an example of this class of exceptions, lithotrity may be mentioned. It must be confessed that it would be an advantage if chloroform could be employed, as it is a great object to diminish the sensibility of the bladder and the spasm about the neck of that organ which so frequently exist, and not only render the operation in itself difficult, but add to the danger of its results. Yet when the nature of this delicate operation is considered, carried on, as it were, in the dark, and when it is further borne in mind that the operator should be fully aware of every step he is taking; in an organ completely removed from

his sight, it cannot be expedient to render the patient insensible, and thus lose the aid which his feelings afford. On many points the patients' sensations are the chief guide which direct the surgeon when he is going wrong, and without them fatal injury might be often inflicted without his being aware of the mischief which he had done. If any operator had arrived at such a degree of dexterity and skill, that it was impossible for him to commit the slightest error, such a man might, perhaps, use chloroform, but until such a man appears, it should not be used. Much mischief might be inflicted unless the feelings of the patient were to control the proceedings of the operator. A case in point occurred in a public hospital before the introduction of crushing, at a time when the perforator alone was employed. Notwithstanding the cries of the patient, the surgeon went on using the perforator in a most industrious manner. The bystanders feared something wrong, but the surgeon appealed to the sound of a metallic body striking against stone, as a proof that the calculus was actually seized, and undergoing the process of perforation. In a few seconds the cries of the patient became more violent; blood issued abundantly from the uretha. The bystanders now interfered, and pointed out to the surgeon, that the noise which he had heard was produced by the external end of the perforator striking against the seals of his watch-chain. The operation was suspended, and the patient's life saved; but had he been insensible, there is no saying what mischief might not have been inflicted, for the calculus was not between the blades of the instrument. The same principle may, perhaps, be applied to certain obstetric operations, which, like lithotrity, are performed in a deep-seated cavity, and where the feelings of the patient may prevent the infliction of fatal mischief. It often produces vomiting; hence, it should not be used in cases where the effects of vomiting may produce an injurious influence on the health of the patient, or on the results of the operation. As examples, cataract and cleft palate may be cited. After division of the cornea for extraction, severe vomiting might cause repulsion of the contents of the eyeball. After sutures of the cleft palate, the severe vomiting may either cause the sutures to give way, or produce such disturbance of the parts as leads to sloughing. Besides this, the active efforts of the patient are required to aid the surgeon in many operations about the fauces; hence another principle of restriction. Indeed, the absence of such active efforts may be a cause of positive danger in certain operations, during which blood may find its way into the air-passages. Some surgeons make light of such accidents, but experience shows that they have often been the cause of much embarrassment, and, at times, of considerable danger. In addition to local circumstances, there

may be certain general conditions of the patient which would render the use of chloroform doubtful. Thus it has been a question how far the agent can be safely employed in cases where a severe shock has been already produced by violent and extensive gunshot injuries. Some high authorities condemn the use of chloroform in such cases; while, on the other hand, our younger surgeons in the Crimea apply it without apprehension. It is to be hoped that the opportunities afforded during the present war will enable military surgeons to decide this interesting question.—*Lancet, Oct.* 20, 1855.

Poisoning by Antimony.—By Prof. A. S. Taylor.

[We extract from the London *Times*, Newspaper of the 24th Dec. the evidence of Prof. Taylor in the remarkable case of poisoning of Mr. Cook, a sporting gentleman, by Mr. Palmer, Surgeon of Rugely, England.]

The next witness called was Dr. Alfred Swaine Taylor, Fellow of the College of Physicians and Lecturer on Medical Jurisprudence and Chemistry, at Guy's Hospital, London. He said :—I received a jar on Tuesday, the 27th of November, at the Chemical Laboratory, Guy's Hospital, containing the stomach and intestines of the deceased. The surface of the stomach was carefully examined with a magnifying glass by Dr. Rees and myself, he being associated therein. There was a brownish-colored, bilious looking liquid adhering to the surface of the lining membrane of the stomach. There was no appearance of ulceration, perforation, or other disease. The lining membrane was generally reddened, and this redness was very strongly marked towards the lesser end of the stomach. There was no appearance of effused blood, nor of mineral nor of vegetable matter, on the surface of the stomach. There was no smell of opium, of prussic acid, nor of spirits, nor of henbane, nor, indeed, of any poison. The large and small intestines were examined throughout, they presented slight patches of redness, both on the outside and inside, on different parts. The small intestines contained a yellowish-colored fluid, chiefly consisting of bile and mucus. The contents of the intestines were removed after they had been cut open, and allowed to stand in a clean glass vessel, twenty-four hours. The sediment was examined and found to contain no mineral or vegetable matter, or other suspicious substances. There was no blood contained in or mixed with the contents of the intestines. The second jar I received the 1st of December. It contained the liver, kidneys, and spleen of the deceased. They were all healthy, and in their structure there was nothing to account

for disease or death. In the intestines and stomach there was nothing to indicate the cause of death. The mucous and bilious looking liquid on the stomach was tested for all the poisons which could cause sudden death, including prussic acid, oxalic acid, morphia, strychnine, veratrine, a poison of hellebore, nicotia, the poison of tobacco : and conia the poison of hemlock, as well as for arsenic, antimony, mercury, and the other metallic poisons. The result of the most minute examination by Dr. Rees and myself conjointly was that there was only a slight trace of antimony on the parts examined, and there was no trace of any other substance. The coats of the stomach were also examined, with the result that there was nothing but a small quantity of antimony in them. The coats of the intestines and the contents of the intestine were similarly tested, and we found only antimony in both. About one eighth part of the liver, kidneys, and spleen were also analyzed and also yielded antimony. The drainings of the jar, after the contents had been taken out were also examined, and were found to contain a larger proportion of antimony than the other parts. They were specially examined for morphia and strychnine, but there was no trace of those bodies present which could be discovered by chemistry. There was a bottle enclosed in the second jar, containing some bloody liquid which was analyzed and yielded antimony. The conclusions which we have drawn from the investigations were :

1. That antimony, derived from some antimonial preparation taken during life, was present in the body of the deceased.

2. That it had been absorbed and carried into the blood, and deposited in the various prrts in which it was found.

3. That the quantities found were small, and might be the residue of a large dose, or of various smaller doses, taken some hours or days before death.

4. That the quantity actually taken by the deceased cannot be inferred from the small quantities found in the body, or from the appearance of the stomach and intestines.

5. The antimony, under the form of tartar emetic, may produce nausea, violent vomiting, purging and other symptoms of irritation af the stomach and bowels. There is, also another symptom produced by tartar emetic, arsenic, or mercury, viz : constriction of the throat, or a sense of choking.

6. That the viscera of the deceased, so far as they were examined by us, presented no appearance whatever to account for death from natural causes.

7, and lastly. That tartar emetic may be used as a safe and innocent medicine, or as a poison, according to circumstances. —*Nelson's American Lancet.*

EDITORIAL ITEMS.

INTRODUCTION.

When in the progress of human effort, it is proposed to engage in a new enterprise, in which the public, or a section of the community, or a profession is concerned, a just regard for precedent and usage would seem to require a reason for the undertaking. Hence the Editors, adding another to the list of medical periodicals, which the American press is issuing in profusion, deem it their duty to offer to their brethren of the profession, some of the considerations which have operated to induce them to engage in such an enterprise, and to indicate their pathway through the field of medical literature before them.

New books and new journals, as well as modified systems, multiply almost as rapidly as new doctors. What does such a fact indicate? Certainly it ought to augur good—permanent and inspiring—to the profession, evincing unquestioned evidence of progress in medical research. It is so, just so far, and no farther, than as it contributes to the advancement and improvement of medical science.

Ambition, prompted by cupidity, irrespective of that love of science which urges the true scholar on, in persevering effort, may, and often does, give rise to the publication of new books; or it may exhaust its resources on the pages of new journals, while yet they reveal the fact, that what ought manifestly to be the true *desideratum* of book-making, is lost sight of, and overshadowed by the absorbing desire of self-aggrandizement. Certainly there are illustrious exceptions to this general truth, which are sources of encouragement to the votaries of our philanthropic science.

But the mercenary and self-exalting element which is too strikingly characteristic of every branch of human progress, is filling our libraries with books that are scarcely more than compilations from standard authors, but little deserving a bibliographical notice, beyond what may be meritorious in typographical execution.

In these days, even the Sciolist can make a book, for he may pluck and gather fruit from the "tree of knowledge," having the trouble only of shaking its branches. Alas! are not too many gathering where they have not planted, and reaping where they have not sown?

The appropriate business of the modern machinery of medical literature, would seem to be, that of grinding over antiquated opinions and obsolete ideas—the debris of medical erudition—re-arranging subjects, and re-constructing the well-expressed and most learned views and doctrines of standard authors—seeking to make new facts out of old ones, with scarcely the primitive cost of a mental effort sufficient to call into existence a single new idea.

Now it is this re-productive machinery, this attempt to grind over the old, the systematic, the standard, and therefore the really valuable, into something novel and striking, that has contributed, we think, more than all things else, to fasten upon the old-school, the strictly *regular* medical profession, the opprobrious epithet of "*Old Fogyism*"—an epithet often of quite too truthful application.

Periodicals are valuable tributaries to the great reservoir of medical literature, gathering from the immense area presented to the view, statistical evidence deduced from practical observation, recording facts and subjecting theories to the most rigid ordeal of philosophical analysis—in a word, they are the vocal organs of the medical profession. Hence, if not prostituted to the selfish purposes of individual interest and personal exaltation, they may elaborate, and herald new and important truths, thereby facilitate the progress of the great interests to which they are subservient. But they may likewise become responsible, in a great degree, for a large amount of opprobrium, and in more ways than one derogate from the high character our profession ought to sustain. In confirmation of the truth of this suggestion, we need but point to such as, following in the

footsteps of the renowned Barnum, advertise living medical men in lauditory bibliographical memoir. But true medical literature has a higher and nobler purpose to achieve, than that of individual exaltation and mere pecuniary interest.

The popular mind is groping among *isms*, *ics* and *pathies*, doubting whether the itinerating, advertising medicine mongers of the present day, have not more substantial claims upon their regard and confidence, than the *educated* physician. The zealous student who has devoted years of the best part of his life to the science of medicine, is doomed to toil, side by side, and contend with the illiterate and ill-bred quack. Must such continue to be the case? Do not truths like these indicate a field for medical journals—a labor more legitimate—more worthy of their purpose and influence, than that of mere personal interest and distinction?

We offer another, imbued with the belief that the real interests of our profession, throughout our state and country, can be promoted by the publication of a new medical journal, on a broad and liberal, yet *independent* basis—embodying the spirit of progress—giving utterence to the views and principles of the profession at large, and especially of this State, carefully eschewing all sectional bias, whether of clique or school. K.

The Regents *versus* Homœopathy.—An edict has been issued by the Supreme Court, in the form of an *Alternative Mandamus*, giving the Regents of the University a choice between appointing an occupant for the Homœpathic Chair, or to furnish a reason for their non-compliance and refusal.

The object of this was merely to bring the matter before the Court for argument, and it will unfold the technicalities of law, and tell us whether the Regents constitute a body independent of the legislature, and supposed to be best able to decide concerning the highest interests of the University ; or whether they are merely subordinate agents, serving under instructions, and having limited power.

☞ See advertisement of Higby & Stearns, in our advertising sheet.

To Contributors.—That we may make our journal eminently practical, we respectfully though earnestly solicit communications from all who can furnish an item of interest, whether it be novel, or only confirmatory of what has already been written. There are hundreds of medical men throughout the State and the West, who are close observers—scientific in practice, and of good literary attainment—the results of whose observations are treasured in obscurity, or are irrecoverably forgotten.

Now it only requires a little effort to overcome the indisposition, or repugnance, which are the only barriers to a methodical arrangement of those facts and deductions, which have ever been the elements of progress in medical research.

If every physician of the State would take the trouble to give us even a brief monthly report of the diseases prevalent in his district, together with the most successful modes of treatment, and appropriate comments in reference to distinguishing peculiarities, we should at once have a collection of valuable statistics, which alone would make our journal a repository of great interest and profit. Nothing, we apprehend, would tend more readily to introduce our professional brethren of one section to those of another, than such diffusion and interchange of thought—to fraternize and bring into profitable relation capabilities otherwise unavailable.

Medical men are too apt to lose sight of the importance which attaches to the most common events of practice. Every case may not intrinsically present features of uncommon interest, but each nevertheless contributes to make an aggregate which may establish a fundamental law of disease, and the indications of judicious treatment. Nor would we restrict our friends to subjects exclusively within the domain of technical medicine. Our columns also invite contributions from the tributary departments of Natural Science, and discussions that elicit *independent* thought, whether applied to the correction of evils in the profession, or the development of new truths. R.

☞ In our second number, Dr. Goadby will commence a series of papers, to be continued monthly till the subject is completed, entitled "The Art of Making and Preserving Microscopical and other Preparations.

☞ Our list of contributors is being made up as rapidly as practicable, and will appear in our next number. All who have been engaged in the publication of a journal of this kind must be aware that *time* is requisite in order to get all the machinery and appliances of such an enterprise into successful operation. We can only ask the indulgence of our readers while we arrange and put into regular and consistent movement the various talents and efforts through whose coherent and associated action we hope to make the journal not merely *acceptable* to the profession, but a "well-spring of rich and varied treasures, that shall be sought with avidity as well by the veteran "who has borne the heat and burden of the day," as by the younger and more ardent of our brethren. Further, we could not expect to have furnished, for the pages of our first issue, much in the way of Clinical Reports ; neither books or journals for bibliographical remark—certainly not until our exchange arrangements shall have been perfected—a work which is impracticable till we shall first have made advances to our cotemporaries. We hope, therefore, in our next number to be able to purvey, from sources more numerous, a greater variety; in a word, to approximate more nearly what our own judgment would approve, and what we aspire to in the publication of a scientific professional journal.

Inasmuch as we shall not be dependent upon contingencies like those which have been obstacles to the mechanical execution of our first number, consequent upon procuring new type, &c. we hope to present the work promptly on the first day of each month.

Our Thank Oefering.—It becomes us to offer our grateful acknowledgments to those of our friends who have so liberally contributed to our encouragement by practical suggestions and words of commendation. We trust that our regard for the interests of Medical Science will ever prompt us to renewed effort in perfecting a work thus auspiciously begun.

Our title foreshadows our intention—to present a journal which is to be the organ, not of a school or faction, but of the profession as a unit. We hope, therefore, that its friends will find in its pages a worthy compensation for their kind proffers and timely aid.

☞ We are pleased to notice the appointment of our friend and colleague, S. W. Thayer, Jr., M.D., to the Chair of Anatomy, in the medical department of the University of Wisconsin.

The selection is judicious. Dr. T. will not fail to adorn the chair he is so competent to fill. We wish him all success, and abundant honor in his new field of labor.—[K.]

CIRCULAR.

COLDWATER, BRANCH COUNTY, MICH., September 13th, 1855.

The Committee of the American Medical Association, "on Medical Topography, Epidemic Diseases, and most successful treatment thereof," address you this Circular in their endeavor to get together materials for a Medical History of the country. Please communicate to the address of the undersigned, any and all information which may enable him to make a report, in which due credit will be given to each colaborator, and his name mentioned in connection with facts and histores furnished by him.

Please mention everything that has been printed or published about the medical history of your district, any topographical account or histories of particular epidemics, and say how far your own observation enables you to vouch for facts therein presented.

Geological and physical charts are very desirable, as well as descriptions of peculiar features of country or city.

Please mention ALL EPIDEMICS of which you may have any knowledge, being particular to assign limits of time and space as exactly as possible, giving, in connection with each disease, the peculiar features of the country, city, ward or street where it prevailed, with slope of rocks, character of soil, meteorological records and observations, altitude above the ocean or adjacent bodies of water, character of the water, artificial changes as by calculation, cutting down or planting of trees, sewerage, drainage, &c. &c.

Any supposed cause of disease, peculiar symptoms, post-mortem appearances, prevention, therapeutical influences, and all details of age, sex, nativity, occupation, &c., of individuals, and of the duration and severity of diseases at different periods, proportion of mortality, &c. &c., should be given.

An early answer to this communication is desired.

J. H. BEECH, M. D., Com. for Mich.

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THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

VOL. 1. APRIL, 1856. NO. 2.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.—Continued.* By HENRY GOADBY, M.D., F.L.S.

But in truth, the statement involves a great mistake. They are *not stomachs*, but inasmuch as they really exist, the question arises, what are they? I have already compared these creatures to the nucleated cells of plants, and the comparison is more pertinent than would at first sight appear, since I believe that the majority, (but not all,) of the transparent vesicles and circular spots, in the class of animalcules, hold in them precisely the same relation that *nuclei*, and *nucleoli*, hold in the class of plants. This statement will be best understood by referring to a series of figures, of *Enchelis Pupa*, a beautiful flask-shaped animalcule, of good fair size, microscopically speaking, and in which it is easy to trace its development.

Fig. 11.

Figure 11 represents the animal in full integrity. Its general contour is that of a Florence oil flask. At its upper extremity will be seen a widely distended oral apperture, quite open, and surrounded by a series of hair-like processes, which from their general appearance, are called *cilia*, from the Latin *cilium*, an eye-lash; and from

their motion, are called *vibratile cilia.* It is a curious and beautiful fact, that organs that first meet our gaze, in a class of beings in the lowest possible condition of organization, (for every individual of this class possesses them,) should constitute a persistent and permanent structure in all animals—man himself not excepted. In these creatures, however, the vibratile organs subserve the purpose of a varied function. They form the sole locomotive apparatus; by their incessant vibratile action, they produce a vortex in the water, by which currents are induced, the one directed to, the other from the mouth.

The water thus kept in constant agitation, contains more or less of food for the sustenance of the creature. In such case it is received in at the mouth, and forthwith transmitted to the nutrimental organs. But when deleterious particles of matter present themselves, as frequently they do, they are instantly rejected—the mouth suddenly closes with firmness and decision—the vibratile organs cease to act. The creature exhibits all the symptoms of great irritation and annoyance, and most frequently changes its place in the field of view. It will generally be found that under such circumstances, the creature has greatly increased in size; the truth seems to be, that when these animals are quietly luxuriating in the water which contains them, with the mouth wide open, and the vibratile organs in rapid and incessant action, that they fill their bodies with fluid, and by this means distend themselves to their utmost capacity. Under circumstances of annoyance, they appear to throw out a large quantity of the fluid they formerly contained, and aided by the constant contraction of their bodies, suddenly become considerably less. The ejection of the water is sometimes much more complete than at others, and on these latter occasions, it is so perfect, and the contraction of their bodies so remarkable, that they are thereby rendered almost invisible.

The motion of these animals through the water is extremely interesting. Sometimes they will be seen progressing in a straight line, with the head, if such it may be called, foremost. At another time they will be seen "turning heels over head," as it were; at still another time the body will be transformed

into a globular mass; and lastly, it frequently rotates, as if on its long axis, from right to left on the same plane. I have enumerated two of the functions of the *vibratile cilia*, and a third has yet to be mentioned—they constitute the sole respiratory apparatus of these creatures.

It is in connection with this latter organization that animalcules ally themselves to other animals—inasmuch as vibratile cilia, of nearly the same size, are found in countless millions intimately covering the mucous membrane of the air-passages of all animals, even up to man himself.

Whatever may be the use or intention of such an amazing display of these infinitessimal organs, we know not; but we do know a single and remarkable fact in connection with them, viz: that *they possess motion irrespective of vitality.* I have examined many times the bronchial tubes of man, as much as eighty hours after death. The whole surface of the mucous membrane was of course, densely covered with these organs, and the whole of them were in rapid and constant vibratile action, with every appearance that this motion could scarcely cease in another like period of time.

Similar examinations made of domestic animals, have always been attended with like results. Cats, Dogs, Pigeons, Rats, Mice, &c., have all exhibited precisely the same phenomena.

Hence it will be seen, that these especial organs present the characteristics of a vegetable, rather than of an animal. Undoubtedly, as we shall hereafter see, they belong to the order of what are known as *vegetative organs* in the animal kingdom. They therefore constitute another *link* of connection between the two kingdoms.

If the microscopical observer will confine his attention to one sole specimen of *Enchelis*, and follow it through its varied motions and gyrations so carefully that he never loses sight of it, a curious fact will soon present itself. Slight indentations will appear on either side, giving an appearance as if the animal's body were enclosed by a ligature, which was slightly tied. This appearance is represented in figure 12.

If he continue his observations, he will find the constriction becoming much more decided, and by this time another fact

will be rendered visible, viz : the production of a series of *vibratile cilia*, together with the development of an oral apperture at the other extremity of the body, so that both ends will be similarly provided in this respect. This is shown in fig. 13. Curiosity thus excited, will induce the spectator to continue his observations, and he will find that the constriction continues to progress, till the two bodies are held together by the slightest possible pedicle. See figure 14.

Fig. 12.

Fig. 13

Fig. 14.

So rapid is the progress of development, that this speedily becomes absorbed, whereby the bodies are liberated, and swim off in opposite directions. The question here arises, is not the analogy between the development in this animalcule and the *conferva* already described *identical?* In each we have the spontaneous separation of the solid nucleated masses, no less than of the cell in which they are contained. In each the process is gradual, and insensible, but persistent.

We have already claimed resemblance between these remarkably minute animated cells, and the cells of plants. We now proceed to direct attention to the points of analogy:

Firstly, the cell-wall of these minute beings bears the closest resemblance to the cellulose of plants. I do not believe that a finer exhibition of *simple membrane* can be found in the animal kingdom, than in the *external tunic* of these creatures. All the microscopic characteristics of the one, are found belonging to the other. By reference to the figures illustrating the development of conferva, (page 10,) it will be seen that nucleated spots are always present throughout its phascs, in a mass of chlorophylle. Even in the divided mass, they are represented as equally numerous in each section. There can be no doubt that these are the future germs, to whose activity the generative processes of the plant are due. I think it not difficult to

understand that one or more of these nucleated spots become mature in advance of the rest—that they all possess the germinating power which remains in abeyance in some of them; as soon as sufficiently ripe they divide spontaneously, and proceed to the formation of other and independent cells. At the same time each divided half of the chlorophylle contains a fair proportion of the unripe and immature germs. Now such, I believe to be the explanation of the spots seen in the animalcules—that by far the majority of the spots, or cells, seen so abundantly in this class, are exactly comparable to the unripe, immature cell germs of the simple plant; and that the spontaneous scission, so constantly seen in all these creatures, arises from the fact of the full maturation of one, or more of these germs. The bulk of these incipient germs is fairly partitioned off, or divided in the section, and remains enclosed in either body, waiting the term of full development, when the like separation of the body is effected.

This process continues so long as unfruitful germs remain, and when these are exhausted, propagation is continued by the contact of the sexes—which sexes come into being, as the last act of the evolution of cell-germs.

The facts which are here assumed to exist in the class of animalcules, are exhibited in full operation to a very remarkable extent in a class of animals considerably elevated in the scale of being, viz: the *aphides*, or *plant-lice*, as they are commonly called. Whoever has examined a rose-bush during the summer months, must have seen more or less of very minute green wingless insects, leisurely crawling about its branches—these are the *aphides*. The fact has long been known, that the females of this destructive insect, produce great numbers of living young—they are *viviparous*, whereas the rule in relation to insects is, that they are *oviparous*.

With a view to understand this anomalous condition of things, Reaumur instituted a series of very valuable experiments, the results of which were deemed so extraordinary, that when he published them to the world, no one believed them. Subsequent investigations, however, have not only confirmed the faithfulness of Reaumur's observations, but extended them. He established the facts—it was reserved for Professor Owen to

explain them. Reaumur obtained a virgin female from a brood of young aphides, and to prevent the possibility of contact with any other individual of the same species, he placed it under an inverted bell-glass, taking care to supply it abundantly with food. In due time the creature obtained its full development, became mature, and shortly after, to the great astonishment of the Naturalist, she gave birth to a large number of living young. He took one of this brood, and treated it in like manner, with precisely the same results, and in the end it resulted, that virgin females continued to bear broods of young, down to, in Reaumur's experience, the tenth generation. Modern confirmatory experiments of a like kind, have extended this process to the eleventh generation.

It should be borne in mind, that during the whole of this period of time, (which would only occupy, probably, a few weeks,) none but females were produced. But as soon as the cell-generating power subsided, the last female of the series gave birth to both males, and females—and these latter, once impregnated, were prepared to go through the same phases as those already described.

Thus far we have traced the development of a single cell in the vegetable kingdom into two cells, and we have endeavored to show the metamorphoses of a single *animal cell* also, into two cells. In neither case do we find propagation carried on by the spontaneous formation of a *plurality of cells.* We have indicated such a process in the vegetable kingdom, as will be seen by referring back to the representation of the Cucumber, page 8, figure 7.

We will see if there be any resemblance to these formative principles in the animal kingdom.

Many of the lower animals, especially amongst the fresh-water Mollusca, deposit eggs of remarkable translucency; they are, in fact, as transparent as glass. From the diaphanous nature of the albuminous portion, the yelk becomes a conspicuous object. If the specimen has been collected at a period sufficiently early, the yelk will be seen to contain a series of cells, and like a plant, the formation of cells progresses at such a

rapid rate, (the season being favorable,) that very soon the entire yelk consists of a dense congeries of such cells.

At this period, with one accord, the cells begin to arrange themselves in the formation of tissues, in which operation their cell character becomes obliterated, and they are destined, (with few exceptions, in which cells become permanent in the construction of certain tissues,) never to return to this primary condition.

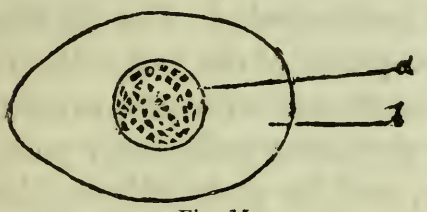

Fig. 15.

Figure 15 represents a magnified view of the egg of *Daphnia Pulex*, or Water-flea—a minute fresh-water Crustacean. Letter *a* shows the yelk, partly composed of cells, which are seen in the interior. This egg is immature, and was obtained by dissecting it from the body of the parent; *b*, indicates the transparent egg-shell, and equally transparent albumen. Had it been allowed to remain a short time longer within the parent's body, the yelk would then have assumed the appearance exhibited in figure 16.

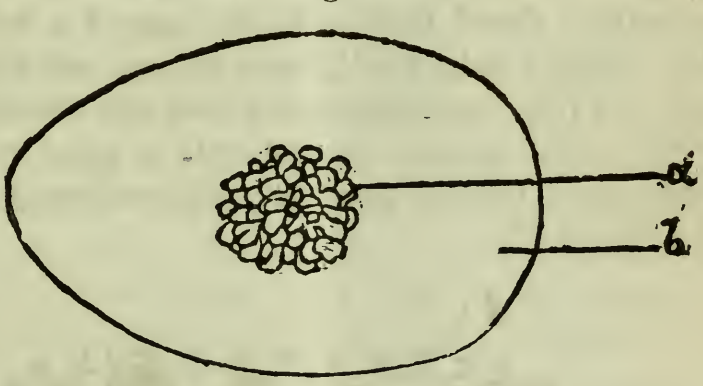

Fig. 16.

Letter *a*, in which the yelk is seen to consist of a mass of cells; *b*, as in the former figure, directs attention to the singularly transparent cell and albumen. This illustration is the copy of an egg of a fresh-water Mollusc.

Those persons who are in the habit of collecting aquatic plants, will frequently have seen attached to their stems and leaves, during the Spring, Summer and Autumnal months, little ovoid masses, of very transparent gelatinous substance. Examined by the microscope, these are found to be the ova of

fresh-water bivalve, or univalve mollusca. The probability is, although in their immature condition, it is extremely difficult to detect the ovum of one animal from that of another, that this particular egg belongs to a minute *Gasteropodous mollusc.* (This word is composed of two Greek roots—gaster, a belly, and pous, a foot—indicating that the ventral surface, or belly, is transformed into, and possesses the function of a locomotive organ, or foot—hence all the slugs and snails, whether marine, land, or fresh-water, are gasteropods.) But in this, as in the former instance, the development of the yelk cells and their transformation into tissues, is effected with such rapidity that it is very difficult to procure specimens sufficiently young to show the multiplication of cells; and the probability is, that this ovum had been glued to the plant but a very short time before it was collected.

A group of singularly beautiful ova came into my possession four years ago, at Syracuse, N. Y. I saw, one day, attached to a part of an internal door, a small transparent mass of eggs. Collecting them carefully, and submitting them to microscopical examination, found them to be the eggs of a butterfly or moth—but which I cannot tell, never having seen the parent. These eggs are very transparent, and they are remarkable for having their entire surface covered with a great number of small transparent tubular processes, with enlarged terminations. In Figure 17,

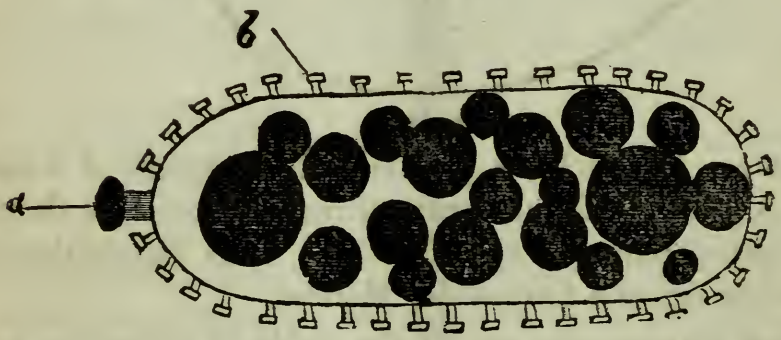

Fig. 17.

these processes are represented only on the margins—letter *b*, but in reality, the whole external surface of the egg is covered with them. We believe that they belong to a respiratory function of a kind. In these eggs there were scarcely two on

the same plane of development. In many, the cells were very large and few in number—indicative of primary cells. The egg selected for illustration, contains a great number of secondary cells, and was evidently more advanced than its congeners. In the cells here represented, there is much disparity of size, as will be seen by reference to the figure. Letter *a* refers to a peculiar process, developed as a means of attachment, and the eggs were glued to the door by the discoid terminal portion of this body.

To be Continued.

ARTICLE II.—*Alleged Mal-Practice—Slander Suit in the Wayne County Circuit Court*—HON. S. T. DOUGLASS, *presiding.*

BENJ. R. EGGEMAN, *vs.* Dr. HERMAN KIEFFER. } TERRY & CROSBY, *and* WM. GRAY, } *Counsel for Plt'ff.*

LOTHROP & DUFFIELD, *Counsel for Defendant.*

The above cause, recently tried in this City, was a prosecution for slander, and involved a subject of peculiar interest, inasmuch as it elicited from Medical testimony a diversity of opinion, respecting the application of important principles in obstetric practice. The discussion of those principles is our present object, and we shall therefore present no more of the testimony than is necessary to a clear understanding of the case, and a just appreciation of the points at issue.

Plaintiff based his suit on the allegation of defendant, that he (plaintiff,) through mal-practice, had caused the death of a Mrs. Hoek.

Defendant sought to establish the fact that death was caused by the neglect of plaintiff to remove the placenta. Herein was the issue. The charge of defendant that plaintiff had killed the patient, was fully established.

The non-professional witnesses agreed that Mrs. H. was confined about 11 o'clock, A. M., attended by a mid-wife, who had failed to deliver the placenta, affirming that "it had grown to the womb." That plaintiff first saw the patient about one

hour after the birth of the child, and again after an interval of two hours; that *he did not remove the placenta;* that the patient died about 1 1-2 o'clock, P. M., and shortly before her death, defendant came and *removed* placenta. But with respect to the actual condition of the patient, during the respective visits of plaintiff, they differed widely.

On the part of prosecution, three witnesses concurred in the declaration of plaintiff—that at his first visit he found patient well, in good spirits, without after-pains, and not flowing. One of the witnesses, (the *mid-wife,*) confirms his assertion, that the uterus was inert, for she swears that "the womb was open and not closed—not acting." They also concur in the declaration that plaintiff examined the patient; that he ordered medicine, was absent for two hours, returned, found her sitting up in bed, talking and eating soup. They swear further, that the patient told plaintiff that in former confinements, the after-birth had to be taken away in pieces. Moreover, that Mrs. H. did not flow at this time more than usual. That in answer to plaintiff's questions, patient said that she felt smart, and if after-birth was away, felt smart enough to get up. One witness swears positively, there had been no flowing at plaintiff's first visit, and patient expressed surprise that there was none.

On the part of the defence, two witnesses testified without reserve, that patient was flowing a good deal during the forenoon—was flowing when they went there; that she was very weak, and complained of weakness and burning at the lower part of her stomach. Another witness swears that she was very weak, and though she could speak with difficulty, she requested that defendant be sent for. Further swears that the clothes showed much blood.

On cross-examination, she swears mid-wife told her that Mrs. Hoek had flowed much, and that everything was full of blood. This she swears positively was the language of mid-wife—again that patient was weak and did not say much.

Another witness swears that patient was very low, and had signs of death about her when plaintiff was there—further, that she asked plaintiff "how Mrs. Hoek was?" to which he said

nothing, but shrugged his shoulders; and moreover, having occasion to reach under the bed, she put her hand into a puddle on the floor; swears that Mrs. H. told her that she had lost a good deal of blood.

On cross examination, the same witness swears that patient's eyes were shut when she went there, (soon after birth of the child;) that such was her condition all the time; that it was difficult for her to speak; that she looked very pale, her features sharp, and eyes sunken, when plaintiff was there.

The mid-wife swears that Mrs. H. was a little *weak* from the time plaintiff first came, but not dangerous, and that *he ordered cold applications to belly, in case the blood should flow strong.* "Can't recollect whether Mrs. H. sat up in bed at all."

The *professional* testimony, as above noted, presented some obvious discrepancies; for example—two learned gentlemen swear that their rule is, not to allow any time to elapse, after the expulsion of the child, before proceeding to remove the placenta. One of them swears that "in a perfectly normal condition of the uterus, the placenta is cast off by the contractions of the organ, immediately after the birth of the child," and assumes that in this case, there was morbid adhesion of the placenta; and further, if attached, the retention is *not a matter of so much consequence in inertia.* But if *partially attached,* the duty of removing it is still more imperative, because the getting up of uterine action, would increase the difficulty of removal. He would say, that "death was the result of antecedent causes, unless it were in proof that a very rapid flowing followed—inertia, as supposed by counsel, is at war with the idea of a full pulse, good spirits and a cheerful countenance." "Inertia may be confounded with faintness, and a peculiar state of nervous exhaustion." Should not expect flowing from taking away placenta, (in this instance.)

The other witness says he has never seen an example of general adherence at full time. He swears that, if he were called after delivery, and there had been flowing and great prostration, he would proceed to deliver, but would seek to produce contraction; would never leave his patient till placenta was removed. If there was flowing, it would be more

necessary to act immediately—that it is the duty of the physician to detach the placenta and produce contraction of the uterus, before he leaves the patient. Also swears that "*hæmorrhage sometimes takes place without detaching placenta.*"

Another witness swears, it is the physician's duty, under all circumstances, to ascertain whether the placenta has been delivered; if not, then proceed to deliver by outward friction. If no symptoms of flowing, action of uterus to be roused by frictions. If flowing, physician's duty is to ascertain if placenta be adherant, and to remove it immediately. After defining symptoms of flooding, he again declares placenta should be removed. Partly adherent placenta is likely to increase flowing. It is not proper practice to leave the placenta long undelivered.

Another witness swears that he saw the placenta on the evening of the third day, and examined it, and found "a small piece gone," and declares "it was a piece near the mouth of the uterus that was missing." Again, that "the after-birth had been removed according to the laws of art." Placenta "had not decomposed." Never takes long to deliver placenta —only one or two minutes; but has had cases where the womb contracted, and it (the womb,) could not be got at for a quarter of an hour. He swears the practitioner ought never to wait "more than two hours to remove placenta," and closes by declaring, if called after two hours, "he would not wait at all, but perform the operation;" and "if there immediately, would try to make pains," otherwise perform the operation.

Another, "would examine the condition of the womb externally, immediately after labor." If small, placenta has been expelled—if large, there is reason to suspect it still in the womb. Should expulsion not take place in fifteen or twenty minutes, it is the physician's duty to examine the condition of the placenta by internal manipulation. Should it not be expelled "in one, to one and a half hours, it should be extracted at all hazards." During this interval, "means should be taken to expel placenta." Should the mouth of the womb manifest a disposition to contract, "there should be no longer delay." Due caution is recommended in removing placenta, and at the

same time means ought to be used to induce contraction—among these, letting the hand remain in the uterus is mentioned. Should flowing occur, the physician is not "to wait for one moment." If, after an hour or so, there be flowing, it is not unreasonable "to conclude there is adhesion, and the practitioner is not to leave the house more than five minutes." Should he arrive an hour and a half after the birth of the child, it is his duty "at once to ascertain the cause of retention;" that "one of the most efficient means to excite contraction, is the application of the finger to the uterus, in removing placenta."

One learned gentleman has had four or five hundred cases, and if called an hour after birth of the child, "would suppose something wrong," and learn "the history of previous deliveries." If placenta was retained, would administer remedies; at the expiration of "two hours, would not attempt to deliver placenta, without striving to excite action—was not bad practice to go away forty steps after administering remedies. If called two hours after child-birth, would allow patient to sit up and take broth. Placenta not to be removed without administering remedies external or internal, when there is no flowing. Has had cases where placenta remained many days."

One witness swears, "if called to see a woman one hour after delivery, would instruct himself in the case; would examine, institute means to produce contraction, and see whether the after-birth could be taken away by pieces, or all together." If patient were strong, would wait for a contraction, if no flooding ensued; his own judgment would guide as to the length of time to wait, before delivering placenta. "Should not think it good practice to remove placenta at once, when patient was well and no flooding." If convinced that contraction would take place, "would at once remove placenta." There is always danger, whether placenta is removed or not. Might leave patient under the following circumstances, viz: if there were no bad indications, mid-wife present, if more urgent care demanded, or for instruments. Thinks he "would not go away, if sent for by mid-wife, in case of difficulty."

Last witness swears, that if called within one hour would

examine into the state of things. If the woman was strong, with womb inert, and a habit of adhering placenta, would recommend external friction and internal remedies; and if the patient was in this state, might go forty steps off—would go away. No physician would remove placenta at once, when the womb was inert.

Cause concluded. Verdict for plaintiff, $300.

EDITORIAL COMMENTS.

From an early period in the history of obstetric medicine, the treatment of the third stage of labor has given rise to much learned discussion. At one time, an able writer having his attention directed to certain consequences of a particular course of practice, anxious to correct the evils thus forcibly impressed upon his mind, and to the utmost of his ability to enlarge the boundary of legitimate science, taught that the placenta should be extracted immediately after the birth of the child. First, by pulling gently at the cord, and if this did not soon succeed, by cautiously introducing the hand into the cavity of the uterus. Such was the doctrine emphatically inculcated by Paré, and afterwards adopted by Chapman and Maningham.

Subsequently others, equally learned, having observed with special care, the distressing casualties often resulting from this mode of procedure, took directly opposite ground; urging with controlling effect, that the powers of nature are always adequate to the wants of the economy, and therefore that the placenta ought ever to be left to the unaided efforts of the parturient female.

Thus Ruysch, Hunter and Sandys taught; although after the occurrence of some unfortunate cases, Hunter was induced to change his views, and it is believed at a later period he advised the removal of the after-birth in four hours after the delivery of the child, even though hæmorrhage had not supervened. Certainly, when the dangers and responsibilities connected with this stage of child-birth are duly considered, it is not surprising that all who seek progress in substantial learning, should devote their energies to the discovery and trium-

phant establishment of such facts and doctrines as should give stability to practice, and guide the accoucheur in times of trial.

While it is conceded, that in the present mature state of scientific midwifery, both principles and practice are so well established that, among the well-informed, there need be scarcely a shadow of difficulty, it is not less certain that there exists no small amount of carelessness in their practical application—and especially in declaring them with clearness, when called upon to do so under the solemnities of an oath.

We have been induced to make the foregoing remarks, as well as those which follow, by the discrepancies in medical testimony presented on the trial of the above suit. The predicate in this suit was as follows, viz:

Plaintiff alleged that defendant had charged him with having been the cause, through malpractice, of the death of a Mrs. Hoek. It was shown that Mrs. H., under the care of a midwife, had been delivered of a child; that not far from one hour thereafter, the plaintiff was called to her assistance, and ascertained that the placenta had not been delivered; that after a brief period, having ordered some medicine, he left, to be absent two hours, and returned about the expiration of that time; that, according to his own declaration, there was no hæmorrhage at either of these visits, but the uterus was *inert;* that he again left, and returned in about a quarter of an hour; that during this latter interval defendant came, delivered the placenta, and the death of the patient soon followed.

Defendant alleged that death was caused by the neglect of plaintiff to remove the after-birth—and herein lay the gist of the suit.

In the further consideration of the subject before us, it will be our purpose to state as distinctly as we are able, the principles that should guide the practice of all, in the various conditions that are likely to embarrass, and which medical witnesses ought always to be competent to present intelligently to a Court and jury.

It is proper here to remark, that entirely unacquainted with the parties in litigation, and but slightly with the professional witnesses, (some of them not at all,) we cannot be regarded as obnoxious to the charge of favoritism, or a disposition to gratify

personal predilections. We have no other desire than to subserve the purposes of truth, and place prominently before the profession, the well established doctrines of obstetrical science in cases of this kind.

The case whose melancholy result gave rise to this prosecution, evidently belongs to that deviation from the natural order of sequences which constitute normal labor—denominated *retained placenta.* And it is to a definition of that deviation, a statement of its varieties, causes, consequences, and the treatment, that we propose to direct the attention of the reader. And here we premise, in the language of the learned Ramsbotham, that "there is no part of natural labor which requires so much judgment as the conduct of the third stage; for the slightest mismanagement of the placenta may be productive of most serious mischief, by converting a perfectly natural, into a most dangerous and complicated case." To which we add the following:—First, that not until the placenta is extruded from the uterine cavity—(and it is not too much to say, until *complete deliverance,*)—and the *uterus is firmly and permanently contracted,* can the patient be regarded as secure from hæmorrhage, and other dangerous results. Second, that the medical attendant is not to be exonerated from the most imperative obligation, to be anxiously attentive to every circumstance connected with the patient, and to remain with her until, nay, sometime after the delivery of the placenta. As a general rule, the same contractile efforts that accomplish the expulsion of the child, also separate the placenta from its uterine attachments, and occasionally expel it entirely from the vaginal cavity. More generally, however, for a brief period, it lies loose within the cavity of the uterus, or is grasped more or less firmly by the os-uteri, and retained therein, till contractile efforts are revived; or from the discharge of the blood within the vessels of the fœtal side, its dimensions are reduced, and it falls by gravity, from this position into the vagina. We have the highest authority for the affirmation, that the average time which elapses between the birth of the child and the expulsion of the secundines, may be stated at from 10 to 30 minutes. Dr. Clark fixes it at 20 to 25, and Churchill states, that "of 277 cases," which he noted with special care, "in 176 the placenta was

expelled—(we understand by the word *expelled*, as used by these authors, *expulsion from the uterus*, not complete delivery,)—within five minutes; in 60, within 10 minutes; in 14, within 15 minutes; in 11, within 20 minutes, and in 16, within half an hour." In the language of the writer last quoted:

Definition.—"Those are to be regarded as cases of *retained placenta*, in which, if the labor be natural, the uterus does not, after a due interval of rest, detach or expel the placenta" from its cavity, "and which consequently requires extraction." "This interval may be fixed at from one to two hours, or thereabouts," for ordinary cases; but on the one hand, more time may be required, if the fatigue have been excessive, and on the other, prompt interference will be necessary if hæmorrhage supervene.

Now assuredly, it is unphilosophical to consider every case of tardy deliverence as an example of *retained placenta*. It will be perceived by reference to the above definition, that we restrict the phrase to the detention of the after-birth, by adhesion or otherwise, beyond a "due interval," within the *uterine cavity*, excluding entirely from this complication those cases in which, after having been extruded from the matrix, it is found in the vagina. It may remain in this latter situation a long time—we have seen not a few cases, in consultation, and removed it after the lapse of from four to eight days, without further ill effects than a greater or less degree of debility, arising from anxiety, and perhaps absorption of the products of incipient decomposition. So likewise, remarks Cock: "it may remain several days in utero, and produce no bad symptoms; but the patient is never free from apprehension, and danger from pains, from hæmorrhage, or constitutional irritation." Such, then, are the dangers of *retained placenta*, i. e. *detention within the uterus*, while in examples of more tardy *deliverence*—those in which the secundines are extruded from the cavity of the matrix, and through ignorance or neglect, are permitted to remain even a long time in the vagina—no serious ill consequence is likely to follow. Nor is the course to be pursued in this condition of the case, doubtful or complicated. There are but two questions in reference to it; these are, first, *to make*

the diagnosis accurately, and this done—the practitioner having *assured* himself that the placenta is in the vagina, or even partly within the cervix uteri—his duty dictates that he remove it, (cautiously, to be sure,) without delay. Second, if there be uterine inertia, from which concealed hæmorrhage is in progress—the placenta in either of the conditions referred to—acting as a plug, it will be incumbent upon him to use every means at his command to procure vigorous contraction, preceding and simultaneously with the extraction of the placenta. The complication we are now considering, is not of frequent occurrence. Churchill has shown, by well-arranged statistical tables, that "in 259,250 cases, it occurred" only "392 times," or about one in 661 and 3-4ths cases. He remarks further, "when the result to the mother is given, 36 died, or about one in five," and concludes that this large proportion of mortality is attributable to the defective practice of incompetent midwives, before the arrival of a qualified accoucheur. The same intelligent writer informs us, "of the above number, 68 were dependent upon inertia, 51 upon irregular contraction, and 63 upon morbid adhesion."

Varieties.—The majority of writers make three principal varieties of this complication of the third stage of labor, differing remarkably in intrinsic characters, and likewise as regards indications and treatment. They are the following, viz:

First, from defective tonic contraction of the uterine parietes, or what in more modern nomenclature is denominated *inertia*. Second, from irregular contraction of the uterus, either in its transverse or longitudinal diameter. In the former, the placenta is enclosed, as in a cyst, consequent upon persistent contraction of a portion of the circular fibres of the organ, recognized as hour-glass contraction, inasmuch as it is divided into two sections, or cavities, in the upper of which the placenta is chiefly or completely retained. In the latter, the uterus is, by the irregularity of contraction, thrown into a cylindrical form, and extends usually in the mesial line of the abdomen, quite to the scrobiculus cordis, thus grasping the secundines so closely that though it may be, and it is believed in the greater number of examples, is detached, no small

amount of prudence and skill are requisite to accomplish its successful delivery. Again, from the spasmodic contraction of the cervix uteri, either at its external or internal margin—more commonly the latter, perhaps—by which the placenta, after having been separated from its uterine attachments, is more or less firmly grasped and retained.

Third, from intimate morbid adhesion of the placenta to the uterine surface. To these principal varieties, other reputable writers have added the following, which manifestly are complications of the third stage of labor, that may embarrass the inexperienced, viz: retention from unusual weakness of the funis, and from excessive volume of the after-birth itself.

Thus we have five varieties of the deviation from normal labor, embraced in the expression *retained placenta*, and having defined them somewhat at length, their *causes* have been sufficiently clearly stated. We proceed next to consider the consequences which are, or may be, its attendants.

"A foreign body in utero," says Cock, "gives rise, first, to pains, dull and heavy, in the lumber region, such as are called "after-pains." These, however, are not of serious import, as they evince spontaneous salutary efforts at expulsion. "Second, to hemorrhage, which may be more or less copious, and constitutes the *great danger*. Such may occur even after two weeks interval of quiet, and for relief, removal alone suffices.

"Third, to discharges often excessively fetid, though sometimes retention occurs without offensive discharge. Why some are feted and others not so, is uncertain. For this, the only remedy is delivery, either manually or otherwise.

"Fourth, constitutional irritation is apt to result, marked by purging, vomiting, and typhoid symptoms—in some autopsies, where the placenta was not expelled, I have found pus in the veins of the broad ligaments."

In certain cases the placenta is conceded to have been absorbed, without giving rise to pernicious symptoms of any kind. Few who are familiar with the well established doctrines of physiology, will doubt the wonderful resources of the economy, or question its power in this instance; nor yet, would any at

the present day feel justified in basing upon such a fact a system of practice, which all experience, save a few exceptional cases, proves to have been hazardous in the extreme.

From the foregoing, we apprehend, it will be admitted that hemorrhage is by far the most formidable immediate *consequence* of *retained placenta*—that it is *preëminently the pathological condition*, to the prevention or correction of which, all the skill and energies of the practitioner ought to be directed.

The other consequences enumerated above, save the first, viz: pains, which (prior to the setting up of inflamation, are salutary,) are remote, gradual in progress, giving opportunity for consulting authority, reviewing experience, and the application of intelligent principles of practice.

Treatment.—We trust that it will not be deemed irrelevant, in approaching what we may feel it incumbent upon us to offer, in reference to the treatment of the third stage of labor, to preface our remarks with the following, from a learned writer:

"It appears to me," he observes, "that in the present day, we are in the habit of following the most rational and judicious practice, in regard to the management of the placenta, which has ever been adopted. With the fatal consequences attendant upon profuse floodings, always before our mind, we do not hesitate to remove the placenta by the introduction of the hand into the uterus, as soon as a discharge occurs, to such an extent as to bring the patient's life into the least peril; and we feel ourselves warranted also, in abstracting it by the same means, provided it is not expelled, within a limited period." Though this is to be regarded as an important aphorism, it must be conceded nevertheless, that it does not embrace all that is involved in the intelligent and successful treatment of the complication now under consideration. While it is most true, that hæmorrhage constitutes, preëminently, *the pathological condition*, to the prevention or correction of which, all the skill and energies of the practitioner ought to be directed, it is no less true that there are conditions of the vital powers, as well as in regard to the location of the placenta, that necessarily give rise to a diversity of indication, and resulting in diversity of practice.

Defective Tonic Contraction—Inertia.—An able writer remarks: "a state of loss of contractability, frequently succeeds tedious labor, which may be equally the *cause* and the *effect* of flooding; and further, after the expulsion of the head, there is most commonly cessation of efforts, and if the placenta has become detached, flooding ensues." This condition, it is believed, the observing practitioner will often have occasion to meet. Such a state of things is frequently delusive, inasmuch as, while but little blood can escape externally, hæmorrhage may be concealed, and blood is likely to accumulate to a dangerous extent within the cavity of the uterus. It is plain, that in this instance the indication differs widely, from that embraced in the above quotation. The only course the practitioner has to pursue, is to be watchful of the condition of his patient, during the recess of uterine effort. If "it be unusually prolonged, if the patient becomes remarkably pale, the pulse sinking, associated with much jactitation, then he may suspect that all is not right. He should immediately examine the condition of the uterus, through the abdominal parieties. If he find it large and destitute of firmness, he may be assured that flooding is in progress, and duty demands that he deliver the child without delay; seeking, at the same time, by friction compression, grasping the uterus firmly to promote contraction.

After the birth of the child, the placenta is to be delivered as quickly as is consistent with prudence; the application of cold, the use of the *binder*, compression of the abdominal aorta, and such other appliances as experience has shown to be efficient in such cases, are to be resorted to, and the *horrizontal position* imperatively enjoined. Indeed, we think there should be no exception to this rule, respecting *the position* of the patient—that she should under no circumstances be allowed to assume the erect posture very soon after delivery. We are but giving utterance to the conceded doctrines of the best writers when we aver, that though there be inertia, if the placenta be attached throughout, there is no flooding; on the contrary, if it be partly detached, from whatever cause, flooding ordinarily follows, and may be internal or external, according to the position of the placenta. We are convinced, that though there be inertia, and the placenta completely or partially detached, there may be such a condition

of the circulation as will not admit of flooding, for a greater or less length of time, after the delivery of the child. Here the accoucheur is, as before, to examine, and having ascertained the precise condition of the uterus, it is incumbent upon him to deliver the placenta, and treat in other respects as before hinted. In no instance, however, is it proper, we think, for him to leave his patient, unless momentarily to look after, and give instructions concerning the welfare of the child, until contraction is established, flooding suspended, and the case out of immediate danger. There is one condition which is not to be overlooked, and which modifies the treatment materially.

"If there have already been hæmorrhage," says Denman, "so profuse as to occasion danger, and the common consequences of loss of blood, as fainting and the like, have already followed, the placenta ought not then to be extracted, nor the patient disturbed, nor any change made, till she has recovered somewhat, from her extreme debility, as the danger would be, thereby, increased, and the patient die during, or immediately after the operation—as I have seen and known in several instances."

Churchill remarks, after having urged the necessity of immediate delivery of the placenta in the event of flooding, "there is one exception to this rule, however, and that is, when hæmorrhage has occurred to such an extent that the patient has fainted, and is almost moribund: in this case, a very little additional loss may be fatal—even so little as may occur from removing the placenta; but as for the present, it is arrested by the syncope, we may postpone the operation until the patient rallies a little, taking care not to wait till the hæmorrhage returns." "If the patient is in syncope," says Cock, "it is better to use means to rally, than by interference to be unhappily auxiliary to her destruction."

From the best deductions we have been able to make from the testimony above detailed, such, we conclude was the condition of the patient, the unhappy results of which gave origin to the above suit. Thus far we have said nothing, (except incidentally,) with regard to the length of time which should elapse after the birth of the child, before the removal of the placenta. Generally speaking, it is safe, and in accordance with universal

teaching, to *wait* for a brief period, (according to the condition of the patient,) during which the physician may busy himself in examining the child, as to the condition of the funis, respiration, &c.—inquiries in regard to the feelings of the patient, and give instructions with respect to such minor matters as contribute to her comfort. If the period of quiescence be protracted beyond the ordinary interval, (15 to 30 minutes,) then it is incumbent, if possible, to ascertain the cause; the condition of the uterus is to be examined, the position of the placenta sought, and if practicable by the ordinary means, delivered. But this has reference to normal cases. The question of time, respecting the complication presented in the above case—*retained placenta*—is essentially a different matter.

As a rule to guide generally, we are quite confident we are uttering the concurrent testimony of the highest authority, that in the first stages of natural labor, the practitioner is justified in waiting from one to two hours, before considering the case as belonging strictly to the division, *retained placenta*, and hence, before he resorts, unless urged by dire necessity, to the abstraction of the placenta by the introduction of the hand.

"The time for interference," says Dewees, "should always be regulated by the condition of the uterus itself—time, simply considered, can never form a safe rule for the delivery of the placenta."

"The promptitude of our interference," says Churchill, "depends entirely upon the presence or absence of flooding. If there be great hæmorrhage, the placenta must be instantly removed, either by traction of the cord, or by the introduction of the hand."

"If," observes Meriman, "no bad symptoms are present—and unless there be hæmorrhage the symptoms can rarely be considered bad—there can be no danger in allowing more time to elapse before proceeding to this operation; and more especially, if there be reason to think that the retention arises principally from the exhausted state of the patient, because it is possible that a little more delay will recruit her strength, and that afterwards sufficient power may be imparted to the uterus to expel the placenta."

We close our quotations on this point, with the following brief sentence from Cazeaux:

"The best of all remedies in cases of simple inertia, is to *wait till the uterus regains its powers:* the return of the contractions might be accelerated, however, by moderate frictions over the lower part of the belly, by titilating the os-uteri with one or two fingers in the vagina, and with the application of cold compresses over the hypogastric region, and on the upper part of the thighs."

All things considered then, we conclude that a sound discretion is to be exercised by the practitioner in attendance; and that it belongs to him to determine, in the individual case before him, at what point of time he is to take the case from the hand of Nature, and interpose the resources of Art.

While, therefore, the mind is so constituted that it needs certain rules, more or less arbitrary in kind, to aid it in seasons of weighty responsibility, nevertheless, we think it will be conceded that in most questions connected with health and disease, peculiar circumstances, inseparable both from classes and individual cases, must give direction to the judgment in practice.

Irregular Contraction.—We have already spoken of the varieties, or different forms in which this complication presents. Our observation leads us to concur with the following remark from Cock, viz: "true hour-glass contraction, i. e. stricture of the uterus in the middle, seldom exists; most cases, so called, are strictures of the os—but irregular contraction may affect any part."

Our limits will not allow us to dwell further on this and the other varieties of *retained placenta*, than briefly to state the indications, and principles of treatment. In this variety, our purpose should be first, to relieve spasm, and second, to produce uniform contraction.

The successful treatment of that form in which the irritation and spasm are confined to the os-uteri, it is believed, in the vast majority of cases, may be accomplished "without the introduction of the hand." If there be no good reason for haste, friction, steady and judicious traction of the cord, grasping the uterus, encouraging the patient, and a little time, will ordinarily triumph.

In the two other forms, "traction by the cord is quite ineffectual, so firmly is the placenta grasped." After reasonable delay, and the use of such measures as counteract spasm, if there be no flooding, the placenta is to be delivered by judicious manual efforts. If there be flooding, of course there is no time to be lost.

Retention of Placenta from Adhesion.—We may be regarded as singular, but from a protracted course of experience, we are compelled to say, that retention of the placenta from *complete* adhesion, is of uncommon occurrence. In more than 30 years' practice, we are quite confident we have not met more than two cases. Partial adhesion, doubtless, is more common; we look upon it, however, as very difficult for the practitioner to diagnose such a case accurately, without the introduction of the hand. "We cannot suspect adhesion, *till delivery is attempted.*" It may be inferred, however, if uterine contraction has been continued with energy, without expulsion.

One writer remarks, "it may co-exist with *irregular* contraction, also with inertia, thus adding greatly to the hazard." It is said, too, to be liable to recur in the same individual—for the truth of which we do not avouch.

If hæmorrhage do not supervene, and no other circumstance demand haste, time, with the other means commonly resorted to, to excite contraction, as frictions, compression and the use of ergot, etc., we believe will most generally accomplish the object sought.

If there be flooding, then, as in other instances, the practitioner is to deliver the placenta, by passing the hand into the uterus, as generally taught.

Convinced that neither of the two last varieties of retained placenta, viz: that from weakness of the funis, and from excessive volume of the after-birth, characterized the case of Mrs. Hoek, we dismiss them without further remark.

In conclusion, we would observe, to us it seems not only improper, but greatly wanting in the kindly spirit of charity, for one individual to allege in regard to another, whatever the vocation or position of either, conduct involving criminality so grave, as that which provoked the above suit. We think there

ought to be a sacredness attached to character, and a *sanctity* to *truth*, of such potent influence as to induce all to check the impulses of passion, or sensoriousness, which if unrestrained, would not fail to disturb the peace of society, by an endless repetition of suits of this kind. Inasmuch as the prosecution was sustained, we find it difficult to conceive how an impartial jury could do otherwise, than find a verdict for plaintiff. K.

ARTICE III.—*Death Trance.*

There is no ailment to which humanity is subject, so frightfully severe as death trance; not that the symptoms or processes instrumental in its production are in themselves to be dreaded, but the fatal consequences which may ensue to the individual who may become a victim of it, are most to be feared. Death is so accurately similated in this disease, that there is the greatest probability that the subject of it will inevitably be buried alive. Neither is this the worst contingency that may happen, inasmuch as no one has ever been affected with this malady, who has not, after an indefinite period of time, invariably recovered and regained full consciousness. Can there be anything more truly terrific, than for a man who has lain himself down in a state of profound sleep, to awake and find himself the inhabitant of a coffin, and buried many feet below the surface of the earth?

The causes which produce death trance, are various. Severe mental emotions *may* produce it, but by far the most common cause, is some *sudden and complete prostration of the vital powers.* Now any diseases, accidents, or causes capable of producing such results, (prostration,) are likely to terminate in this form of trance. At the head of such a list, undoubtedly Cholera takes the lead. There have been more instances of this variety of trance immediately succeeding Cholera, than are traceable to any other known cause. A healthy man or woman, is suddenly seized with a Choleraic attack—the depression of all mental and physical power is instantaneous; the patient is placed in bed, and in two, three, or more hours, glides into death trance. At this moment, it will be found that the action of the heart has

entirely ceased; respiration and all muscular motion are suspended; the pupils of the eyes are dilated, and the body becomes as cold as in death. So accurate is the deception, that Doctors and nurses alike, agree in pronouncing the patient dead. The application of stimuli altogether fail, and there is no means of distinguishing between this, a really living, and a dead body. Still there is one noticeable fact, which although usually present, admits of some few and occasional exceptions, viz :—there is a total absence of rigor mortis—the rigidity of death—all the limbs and joints are singularly pliant, and the whole of the body is remarkable for its great softness. The exceptions are, when the death trance results from some spasmodic seizure, which gives origin to the same rigidity that usually characterizes ordinary death.

So again in child-birth: a woman is subject to excessive hæmorrhage. The depression of her vital powers is immediate and extreme—death trance *may* be the result.

It is unnecessary to dilate upon the various causes, all tending to produce this sad contingency; it is sufficient to repeat, that sudden and considerable depression may be regarded as essential to its production.

Death trance appears to have been common in all ages of the world, and the records of its existence in past time, are quite voluminous. It seems rarely to have occurred, without producing presentiment, on the mind of some one, nearly related to the supposed deceased, of the probability of its existence; or in other words, some friend is doubtful as to whether the relative in question were, or were not buried alive.

It is curious to contemplate that this feeling has assumed a specific character in the Eastern countries of Europe, where a strong belief is entertained in the existence of *Vampires*. Now a vampire is said to be a dead body, and buried; it is supposed to come out of its grave nightly, to suck the blood of the living, and thereby to preserve itself from decompositiou. The bite of a vampire leaves no mark behind it, and the individual bitten, has no other means of knowing the fact, than through the agency of a dream, or a vision. The subject of this nocturnal visitation believes that he will speedily die, and in his turn become a vam-

pire. To meet this distressing state of things, there is said to be but one remedy, which is to eat of the earth of the Vampire's grave, and to smear the body with his blood. For this latter purpose, the grave must necessarily be opened, and the body exhumed, which can only be done by application to the authorities, who then visit the grave in solemn and formal procession, and when the body is exposed, order a stake to be driven through the chest, with a view to effect the complete destruction of the Vampire.

If space permitted it, we could easily furnish numerous examples of such proceedings, which have long ago occurred, and have been faithfully recorded. All of them agree, however, in the following particulars: the bodies of the reputed Vampires have all of them presented the appearance of perfect freshness, after being interred, for from forty to eighty days. In most instances, it was evident that the individuals had moved in their coffins, being found in positions other than that in which they had originally been placed. In some instances, fresh blood has been found upon their lips, which was of course referred to the results of the last night's meal. When the stake was driven through the body, it was always accompanied by a great flow of liquid blood—the grave would be filled with it—and in too many instances, the driving of the stake was attended with a spasmodic action of the whole body, and a horrible groan!

Now who can doubt that all these unfortunate persons were the victims of death trance? The most remarkable fact, however, in connection with it, is yet to be told—*death trance is epidemic!*

In Servia and Wallachia, the records show that at certain periods, from twenty to forty people have been subject to this seizure within a limited time. They have all been buried, and denounced as Vampires; and this has sometimes extended with numerous additions, through a period of many months. Individuals of both sexes, from eight to sixty years of age, have been its victims. Their graves have been opened, and the bodies exhumed under official inspection and authority, with the like unvarying result. Ultimately this epidemic will subside, and Vampireism is not again heard of for many years.

Some severe forms of Hysteria are fruitful in the production of this disease; the young are more prone to it than the aged—females than males, clearly demonstrating the ages and temperaments most susceptible of Hysterical manifestations.

In confirmation of the foregoing remarks, and in illustration of the facts, we transcribe the following cases:—Mons. Rigadeau, Superintendent of the Military Hospital of Douai, France, was sent for, to see the wife of Francis Dumont, and to attend her in child-birth. He had to ride some eight or ten miles distant, and when he arrived, was informed that he was too late, for that the woman had been delivered of a still-born child, followed by severe hæmorrhage, and had been dead for two hours. He desired to see the bodies of the mother and child, and they certainly appeared to be dead. He found the body of the mother remarkably soft and tumid, and although he could give no sufficient reason for it, he yet expressed an opinion that she was not dead, and desired that care might be taken of her, and said he would call again the next day. The child he conveyed to the hospital over which he presided, confiding it to the care of nurses, desiring them to make use of the remedies usually employed to recover, in suspended animation. They were unremitting in their exertions for three hours, and just as they were about to discontinue their efforts, the child opened its mouth; they gave it wine, and ultimately restored it.

The next day at a late hour, having the duties of his hospital to attend to, which claimed precedence, he again visited the mother of the child, and found, to his vexation, that her body had already been placed in a coffin, and screwed down, while preparations were being made for her immediate interment. He insisted upon having her removed from the coffin, and placed in bed, and then by slapping the palms of the hands, and resorting to those means which had been so efficacious in the case of the child, after some hours of continued exertion, he had the satisfaction of restoring her to consciousness and to life.

A young French lady was courted by a young gentleman, to whom her parents objected. They designed her for an older and a wealthier man, to whom eventually she was married. Some months after her wedding, she was taken suddenly ill, and died. Her former lover heard of her decease, ascertained where

she was to be buried, and finding that she was to be entombed in the vault of a church in the city of Paris, he sought the sexton, and by a bribe induced him to promise that, after the funeral service, he would hand over the keys of the vault to the lover, whose sole object in obtaining them was, that at dead of night he might repair to the church, open the coffin of the deceased, and once more gaze upon the face and form he had so dearly loved. This he accomplished; and while bedewing her face with his tears, great was his astonishment to see her suddenly sit up, and ask—"where am I?" The explanation was soon given, and then he suggested, that as her former husband had buried her, he had really given up all claim to her, and that the best thing they could do, would be to quit the church, and in disguise reach the nearest sea-port, and cross the British Channel to England. In all this they were successful. After arriving in England they were married, and continued to reside there for several years; but in the end, the wife had an unaccountable desire to revisit Paris, believing that, under all the extraordinary circumstances that had occurred to her, she must be altogether forgotten. Her husband consented, and during one of her early walks in that metropolis, they met her former husband, who instantly knew her, and claimed her as his wife. The case was taken before the law of courts, and notwithstanding the lady's counsel plead the desertion of her by her first husband in the act of burial, the court adjudged her to be his wife, and ordered that she be given up to him. The case was carried by appeal before the Parliament of Paris, (from whose records this history has been obtained,) but fearing the confirmation of the sentence of the court below, which actually occurred, the parties once more returned to England, where they lived and died.

Again: in the church of Cripplegate, which stands in Fore-street, in the city of London, England, may be seen a tablet, erected to the memory of a woman, for many years a resident of that parish. This record states that soon after her marriage, she died suddenly, and was buried. It happened, however, that when she was a girl, a friend had placed a small diamond ring on her finger, with the request that it should never be removed; and she complied for so many years, that her finger, in the mean

time, had grown so large as to render its removal impossible. It could no more be removed after death, than during life, and consequently it had to be buried with her. The news soon spread, that a body was to be buried with *a valuable diamond ring* on her finger, which excited the cupidity of the sexton. She was buried; and at night the sexton went to the grave, provided with a dark-lantern, and other tools to assist him in his operations, and having opened the coffin, attempted to pull off the ring, which he found to be impracticable. He therefore left the grave, open as it was, while he went home to obtain another tool—a saw—with which to remove the ring, finger and all! He returned, and just as he began to use the instrument, the woman suddenly started up, pushing him over, and demanded what he was doing with her finger? The terrified sexton, as may well be imagined, ran off in the greatest fright, while the woman, recovering her consciousness, soon discovered her real position, and getting out of the grave, lantern in hand, sought her home. Loudly knocking at the door, she aroused her husband, and demanded admittance. He believing he saw her ghost before him, endeavored to persuade her that she could not come in, for that she was dead, and he had only buried her that afternoon. She explained to him the whole particulars, and held up the bleeding finger in confirmation of her appeal; when the husband, convinced of its truthfulness, admitted her. She lived to have six children after this event, and died at a good old age.

In the summer of 1854, when the Cholera committed such fearful ravages in the United States, and in Canada, a traveler stopping at the Tremont House, in Chicago, was suddenly attacked with this disease, and at the end of three hours was pronounced dead. The landlord had his body conveyed to an out-house, there to wait till a coffin and hearse could be procured. It happened at this time, that deaths from Cholera were so numerous, that the coffin-makers could scarcely supply the demand, and consequently, in the out-house his body was doomed to lie. On the night of the second day after his decease, the undertakers came, provided with a coffin, and were admitted by the key to the apartment where the body rested. But to the astonishment of all present, they found the man sitting up, and

demanding why they had removed him to such a place as that? This incident was subsequently twice repeated, under precisely similar circumstances, in that house alone, during the period alluded to. How many cases occurred at other houses, and how many persons were buried alive during the visitation of this disastrous epidemic, we know not.

The whole of the cases above recited, are unquestionably referrable to *death trance* alone. In the first instances described, the details of the *causes which produced the trance*, are not given; with regard to the last, *Cholera* is alone responsible.

When this disease first made its appearance in England, in 1832, and at every subsequent visitation of it, hundreds of cases of *death trance* occurred as the immediate result of the first attack; and the like occurred as frequently in France.

It was formerly the custom, both in England, and in France, as it is at the present time in the United States, to inter the dead at the earliest convenient moment after dissolution; but warned by the many fatal consequences of this proceeding, the custom of hasty interments has ceased in those countries, for many years. No one can now be buried there, until a green tinge makes its appearance upon the abdominal muscles—the unmistakable sign of incipient decomposition, always first seen through this thin layer of muscles. A body might lie for four or six weeks, or more, but if this color failed to appear, it (the body,) would be retained, either until this unequivocal sign was apparent, or the patient had recovered. To this circumstance is due the preservation of thousands of valuable lives.

Cases of death trance have occurred so often in the world, and still are of such frequency, that it would be easy to give an extended list of illustrations. We think, however, that the few already offered are sufficiently prominent and remarkable, to answer the purpose required of them. In those cases it will be seen, that we have considered the subject of death trance only in relation to its production, from strictly natural causes. Another, and most remarkable phase of it, however, yet remains to be described, viz: the power which some men possess, of *imitating* it, voluntarily, even to the minutest particulars. The Fakirs, of India, are noted for their great capabilities in this

respect, and we will quote, probably, the most astonishing case of this kind on record :

A certain Fakir, who had practiced this art for a long time, and with great success, much desired to exhibit his skill before the Governor General of India. The Governor, believing the representations to be untrue, was for a period of time unwilling to give his presence at the promised exhibition, but at length yielded to the man's importunities, and appointed a day, on which, attended by his suite, he would witness the experiment. The day arrived, and the Governor with his attendants being assembled, the man laid himself on a table, and appeared gradually and insensibly to die. At the end of half an hour, there was no pulse discernible, respiration was suspended, muscular motion had ceased, the man appeared to be unconscious, and the application of strong stimulants failed to affect him; the body, moreover, had assumed the coldness and clamminess of death. Having reached this point of the experiment, by his own desire he was to be screwed down in a coffin, and buried to a great depth in the earth. All this was done, and to prevent the possibility of the body being tampered with, the Governor placed a sentinel over the grave, with instructions to relieve him every four hours regularly, day and night. By the terms of agreement, the Fakir was to remain buried for four weeks, and he engaged at the end of that time to recover. When the day for exhumation arrived, the Governor and his retinue attended. The grave was opened, the coffin brought forth, the lid removed, and the man once more placed upon the table, on which he had died; and to the astonishment of all present, at the expiration of about half an hour, he recovered, and sitting up, asked the Governor if he was satisfied?

Again: an officer in the East India Company's service, Col. Townshend, after a long residence in India, returned to England in bad health, and placed himself under the care of Dr. Gooch. On many occasions he invited the Doctor to come and see him die, and return to life again. The Doctor, believing there was some foolery in the case, did not care to waste his time in any such matter; but at length worried by repeated requests, he yielded, and went to the Colonel's house, attended by Doctors

Cheyne and Baynard, and Mr. Shrine. When all was prepared, and the Colonel was laid on the table, it was agreed that Dr. Cheyne should feel the pulse at the wrist, Dr. Baynard keep his hand on the heart, whilst Mr. Shrine should hold a looking-glass before the mouth and nostrils. Almost immediately the pulse began to fail, the heart's action decreased, and the respiration lessened. These several vital functions became more and more feeble, until, in a short time, they gradually died away, and at length entirely ceased. In the mean time, the Colonel's countenance gradually assumed a death-like hue, and the coldness of death diffused itself throughout his body, till at the expiration of half an hour the process was complete, and he appeared to be unmistakeably dead. By this time, only one opinion pervaded the minds of the medical men present, viz: that for once he had carried the joke too far, and they were preparing to leave the apartment, when a slight motion arrested their attention, and soon after, in an exceedingly faint voice, he begged them to stay. From this moment he recovered as gradually as he had died, and the parties being satisfied, left him. It is not a little remarkable, that shortly after the medical men retired, he sent for an attorney, made his will, and shortly afterwards *died in earnest.*

We have thus endeavored to show, firstly, that such a disease as death trance really exists; and secondly, to show that its occurrence is much more frequent than is usually supposed. We would earnestly impress upon the minds of our readers, the sad and fatal consequences that may obtain from the practice of too early interment; and would suggest, that while no possible harm can occur to the living, by retaining the dead for several days, humanity requires that we should keep the body sufficiently long for the development of the only test of actual decease, viz: the appearance of incipient decomposition, as seen through the parieties of the thin abdominal muscles.

As *death trance* is of such frequent occurrence, and its manifestations so remarkably real, it would seem desirable to treat those supposed to be dead, in a different manner from that usually practiced. So far from stripping them, and placing them in a cold situation, we believe it to be essential to keep the

body *in a warm place*, and do all in our power to retain the vital heat as long as possible. Manifestly, two advantages would accrue from such a practice; if the body be *really* dead, the process of decomposition will be accelerated by heat—but if it be still living, it certainly would be the mode best calculated to fan the vital spark into a flame—in other words, to restore the individual to life.

Finally, we cannot sufficiently warn the public from the danger of tampering in any way, with any form of trance. As we purpose continuing this subject, with a view to illustrate the characteristics exhibited in the other forms of trance, we shall show that these diseases, (not having a recognized existence as such in the public mind,) are being propagated to a very great extent, as it will appear that some of the most popular *isms* of the present day owe their prominence to the production of certain species of *trance*. H. G.

ARTICLE IV.—*A Case reported to the St. Clair Medical Society.* —By JOHN T. TRAVERS, M. D., M. R. C. S. L.

GENTLEMEN:—I wish to lay before you, this evening, the report of a case in Surgery, which has fallen under my observation since our last meeting. I regard it as interesting, inasmuch as it tends to show the evils which result to the public, by the employment of ignorant medical men—thus bringing sorrow and suffering, where much might have been avoided by judicious treatment. It is said, "there is nothing new under the sun;" but I think the treatment of this case is something new in surgery.

The case to which I allude, is that of Simon Petis, who died on the 21st of January last, from injury of the head. On the 19th of January, about 3, P. M., as he was in the act of passing from one log to another, on his roll-way, his foot slipped, and he fell head-foremost down the bank, about five feet, striking his forehead and nose violently on a log. He arose, returned to his house, somewhat stunned, and bleeding freely from the nose and mouth. He immediately sent for a Doctor,

who adopted the following treatment, as I learn from himself, and attendants, on the Monday following, when called on to see the patient: Blowing powdered alum up his nostrils, till he caused a clot, and stopped the bleeding; some Dover powders to make him sleep—(I use the Doctor's language)—a little antimony, a little spirits nitre, to keep down the fever.

He succeeded in stopping all external hæmorrhage about 3, P. M., on Sunday, up to which time, Petis had been in possession of all his faculties, and conversed with his family and attendants suffering occasionally from spasmodic twitchings all over his body. Shortly after the hæmorrhage was arrested, symptoms of compression began to show themselves.—coma, dilated pupils, stertorous breathing, convulsions—to arrest which, the Doctor gave very largely of Tinct. Assafœtida and Valerian; which he said he had always been in the habit of giving for fits, and which he never before failed in curing, expressing great astonishment at his want of success in this case. He attributed his failure in this instance, to the great pressure of the patient's chest, and fullness of his stomach, Petis having had a hearty dinner a short time before the accident; but had no doubt he would at last succeed, and that the patient would be better when his bowels moved, which he was endeavoring to effect by soap-suds injections.

I informed the Doctor that the man was fast sinking from compression of the brain, caused by extravasation of blood, and that unless some active measures were taken, he could not last many hours; even then, there was only a shadow of a chance, but begged him not to let the man die, without making an effort to save him. I proposed bleeding, and if that did not give relief, to resort to trephining. He scouted my opinion, and declared that "if the man was bled, he would die right off;" that he did not think that these symptoms were caused by compression of the brain, but that the whole truth was, pressure of the chest and stomach, for, said he, "see how it works."

I then had other surgeons called in, who, agreeing with me, we bled him at 11, A. M., on Monday. Immediately after, the stertorous breathing was somewhat relieved; the pulse, which

had been slow, labored and intermittent, became regular, and he appeared to regain the use of his arms, which before lay powerless at his side. We left in half an hour after, requesting the Doctor to renew the bleeding in an hour or so.

We returned at half past 1, P. M., and found the symptoms of compression increased; bloody froth issuing from his mouth, pupils dilated to their full extent, breathing labored—being performed with great difficulty—and extremities cold. I proposed trephining without delay, as it was evident he could not last in that state much longer. The instrument to be applied to the Os-Frontis, as near the mesial line as possible, as I supposed that either the internal plate of the frontal bone was fractured, and the spiculæ driven into the brain, thus causing the convulsions and hæmorrhage; or, that the cribriform plate of the Ethmoid bone was broken up, and the Crista-galli driven through, and lacerating the small vein which forms the communication with the frontal sinus. The operation was considered hopeless by all present, and it was abandoned. He died in a quarter of an hour after. A post-mortem examination was refused.

Now, Gentlemen, was this proper treatment? Was the course adopted, such as the merest tyro would put in practice? Or was it such as some ignorant old woman would adopt? Did this poor man get the least chance for his life? My opinion is, that he did not, and that a worse plan of treatment could not have been adopted. That the man would have died under the best treatment, is possible, but it is obvious that the plan adopted offered no prospect of recovery. Indeed, he would have been much better off, if Nature had been left to perform her own cure.

That death was caused by compression, I have no doubt, and that the compression was caused by extravasation of blood, I think admits of as little doubt. Look at the progress of the case: the man retained the use of his faculties for twenty-four hours, and till shortly after the bleeding was stopped. The symptoms of pressure came on gradually, and continued to do so till death put an end to his sufferings. The convulsive twitchings set in *shortly after the accident,* which would indi-

cate that there was some laceration, and that there must be fracture somewhere. Now where was the lesion?

There was no external fracture, nothing to mark its exact site, but the skin across the forehead was slightly bruised. The severest injury appeared on the nose, which seemed to be somewhat flattened. I entertain the opinion, that the chief injury was caused by the man's falling with his whole weight on his nose, forcing the septum-nares against the vertical plate of the Ethmoid, and in its turn comminuting the cribriform plate of the Ethmoid, driving the Crista-galli up into the brain, rupturing the commencement of the frontal sinus, thus at once causing laceration and effusion.

Port Huron, March 4th, 1856.

ARTICLE V.—*A Lusus Naturæ.*

During a recent visit to Grand Rapids, we were kindly presented, by our worthy host of the Western Hotel, Mr. Squier, with the skin of a Mink, which presents some very curious and interesting particulars.

We have consulted several works on Natural History, with a view to acquire some information concerning the animal; but we have done so in vain. We do not find its name anywhere mentioned, and whether its authography should be *Mink* or *Minx*, is more than we at this moment know.

The *Sable* is described as a *Weasel*, and our specimen constitutes the nearest approach, in the fineness and beauty of its fur, to the true *Sable;* hence it is commonly known as the *American Sable.* But neither under this, nor any other designation, have we as yet succeeded in finding any account of it. Our skin, (which is a very beautiful one,) is evidently of an adult animal. The teeth have seen some service, and one canine tooth is broken. As regards the head and anterior portion of the body, every part is quite normal; but continuing our observations along the ventral surface of the body, we find a total absence of the hind extremities, and the tail appears to be turned upside

down. Upon turning the skin over to examine the back, we shall find that the hind legs are *there* placed, but in a natural position—i. e. with the toes in the direction of the head.

Not having the bones to consult, and never having seen them, we are necessarily driven to conjecture, to account for this curious condition of things. We think there is no occasion to doubt that the mal-formation was caused by the inversion of the pelvis, as the position of the tail agrees accurately with the arrangement of the hind legs. But, even to sustain this idea, difficulties of no ordinary kind beset us. In tracing the direction of the spinal column, from the anterior portion of the back, where, in all probability, its development was normal, we are forced to conclude, that a considerable portion of it quitted the attachment of the skin, and passed freely through, and amongst the folds of the intestinal canal, and by some means, (to us unknown,) the anus, and organs of generation, became also inverted in their position.

In each figure will be seen a curved dotted line, which describes the direction which we assume the vertebral column to have taken. That the pelvis was reversed, we think admits of no doubt, and we cannot understand any other mode of connection of this inverted portion of the skeleton with the anterior portion of it. We beg to repeat, that this explanation, so far, is only conjectural.

The Indian who shot this animal, had long been acquainted with it, and he suffered it to live, from the pleasure he derived in witnessing its awkward motions. When not pressed for time, it would appear as represented in Fig. 1—standing erect on its fore legs, and the remainder of its body resting on the ground, with the hind legs, of course, up in the air.

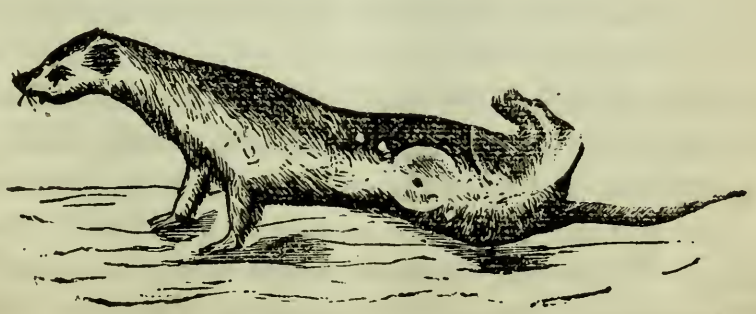

Fig. 1.

But if hurried, or anxious to escape, it would throw itself on its back, as shown at Figure 2, and by the aid of its hind legs, (which are remarkably well developed,) kick itself along at an incredible rate of speed.

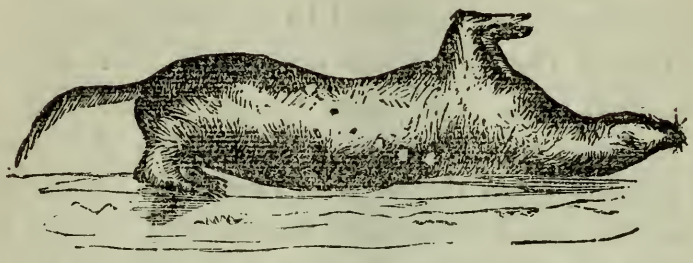

Fig. 2.

Monstrosities of all kinds and descriptions are far from uncommon, but they are generally of such kind as to impede the functions, more or less, of the animal in whose body they are exhibited. But from all we can learn, this does not appear to have been the case in this instance. The skin is a large one, betokening full maturity and robust development. As it is a law of philosophy, that where one sense is denied, and another is rendered more than ordinarily accute, we can readily understand that, from the peculiar use to which this animal applied its hind legs, and which never could have been used in any other way, they would acquire a greater amount of muscular power than common.

We see no reason to doubt the statement of the Indian, that when the fore legs were inverted, he was enabled to command an amazing speed, by the singular and uncommon action of the hind feet. H. G.

Diminution of pain in the application of Leeches—The leeches are to be placed in a glass half filled with water, which is then to be rapidly reversed upon the part to which they are to be applied. The patient feels the sensation only as if one leech was biting. When they have all taken hold, the glass is to be carefully removed, catching the water in a sponge.—*Southern Journal (Review Medicine.)*

ARTICLE VI.—*A Practical Treatise on the Art of Making and Preserving Microscopial and other Preparations.* By HENRY GOADBY, M. D., F. L. S.

The great, and more extensive use of the microscope in modern times, and the importance of its revelations, has engendered a thirst for information in all that pertains to it.

But more especially, are men desirous of obtaining information, as to how they should proceed to supply themselves with good, and useful illustrations of all kinds, to be examined and studied by the microscope, and retained for permanent use.

It is too meet this latter want especially, that I design to give a series of explicit, and practical instructions, in reference to this subject. But firstly it is essential to show how to *preserve, and display objects as wet preparations.* And for this purpose, I am constrained to publish matter that has already appeared (in the year 1852) in Silliman's Journal, being however, greatly enlarged in some important particulars, as it will appear in its present form.

In the order of sequence, this material should evidently take precedence, as a foundation for the rest, and as soon as it is completed, accurate information will be given, firstly, of the mode of preparing vegetable, and subsequently animal tissues, of all kinds and descriptions. It is sincerely hoped that, the instruction thus sought to be communicated, will be no less pleasureable than profitable.

In the preserving fluids that I use, and which are known by the name of "Goadby's Solution," the following are the ingredients, viz: rock salt, alum, corrosive sublimate, and the white oxyd of arsenic, or arsenious acid.

These materials are never all employed at one time, and they should be used judiciously, to prevent the contingency of destroying rather than preserving specimens of Natural History.

To this end, I think it desirable to describe the *properties* of the materials respectively, before giving the necessary formulæ for the fluids.

Rock (or bay) salt is very preservative, and will maintain the characteristics of all tissues unimpared, better than any other agent with which I am acquainted, provided the *strength*

be well regulated; and I make much greater use of the purely saline, or B fluid, than any other.

Alum possesses very important conservative properties; it is astringent, coagulates albumen to some extent, rendering transparent tissues opake in proportion to the volume of alum brought in contact with them; but it *destroys the carbonate of lime*, converting it into insoluble sulphate. The aluminous or A. 2, fluid, however, is a very valuable composition, and to it are due many important preparations, which may be found both in my own possession, and in the Hunterian Museum of the Royal College of Surgeons, of England, and which never could have been made without its assistance.

Alum *combines* with animal tissues so perfectly, that it cannot be dissolved out of them by long continued maceration in water. Whenever it is considered necessary to use the aluminous fluids either to give form, and support, to an animal, or any part of an animal, or a delicate tissue, by reason of its astringent property, or to render diaphanous animals or tissues opake enough to be visible, *the excess of alum* should be washed away with water, and the animal, or whatever it might be, with few exceptions, removed from the aluminous, and preserved permanently in the B. fluid. It should be constantly borne in mind that the effect of fresh volumes of the aluminous fluid should be cautiously watched, lest the alum produce mischievous results; but with care it may even be used to the full extent of its valuable properties on the soft parts of an animal enclosed in a shell of carbonate of lime, or otherwise possessing that earth, for the muscular, nervous, and other soft tissues, will be much sooner affected by the action of the alum, than the denser tissues containing earthly matter. From its acting on carbonnate of lime, it will be seen that the aluminous fluid is not of universal application.

Corrosive sublimate is also astringent, and the coagulator of albumen; the intention of its application is not for the sake of either of these properties, but simply to prevent vegetation *growing in the fluids* respectively. But inasmuch as albumen takes from corrosive sublimate a portion of its chlorine, and thus converts it into calomel, and as all animal and vegetable tissues are more or less albuminous, the propriety of using it all,

may well be questioned. In places where the sporules of fungi abound, as in the store-rooms of large museums, not even the presence of corrosive sublimate can prevent them from *growing upon the surface of either* of my preserving fluids, if they contain animal matter of any kind in *open* vessels, i. e., not hermetically sealed; but in a long experience of this fact, although I have had open jars, dishes, and other vessels containing dissections of animals waiting their turn to be mounted permanently as preparations, in which the surface of the fluid has been covered during the summer months with vegetation of considerable substance, and which has continued to increase, and flourish magnificently for weeks, yet, I have never known it to descend into the fluid, in any way, provided they were well covered with it. Indeed either of these fluids will preserve plants, as easily, and certainly, as they preserve animals; and were the fungus to grow *into* the fluid, it would die, and be preserved; neither have I at any time, during twenty years experience of preparations made by the use of my fluids, and contained, and sealed down, in the several forms of vessels and cells, also my invention, ever found a particle of vegetation in a single preparation; and during the last nine years I have been using the fluids, both for permanent preparations, and stores, without the addition of corrosive sublimate, and always with satisfactory results. I believe, therefore, that the corrosive sublimate may be safely left out, although I shall include it in the receipts of the fluids.

Arsenic possesses the power of softening animal tissues to a remarkable extent, and this property has no limit.

A few years ago being requested by the Examiners in Anatomy, of the University of London, to preserve a body during the summer season for their examinations in the autumn, and desiring to retain the tissues severally in as natural a state as possible, I added arsenic to the B. fluid. For some months nothing could exceed the success of this experiment, and if the B. fluid had been substituted without arsenic, probably the body would have been permanently preserved. It was neglected however, in this respect, although it was watched with some solicitude until, after the lapse of rather more than twelve months, the entire body was found (with the exception

of the bones) reduced to the condition and appearance of decomposing size, except that it remained perfectly sweet. I have made a number of experiments with the same results and have seen the characters of muscle, tendon, nerve, &c., gradually disappearing, until nothing but a glairy fluid remained, but was always perfectly sweet. As arsenic acts upon glass, and glass vessels, by combining with the lead, and for the above reasons, it cannot be employed for preparations that are desired to be permanent. I have made a few such attempts, but they have all ended in failure.

The softening property is that for which arsenic should be employed, either to recover animals that have been hardened, and corrugated in alcohol, or to enable one to proceed with elaborate dissections of nerves which must necessarily be tedious. My friend Dr. T. S. Beck of London could never have made such a display of the nerves of the uterus—the finest dissection of nerves in the human subject that I believe has ever been made—without the aid of arsenic, which was never allowed to do any mischief, occasionally washed away, then renewed, and so on; and the nerves, under its well regulated influences, were as tough as copper wire, and although very delicate in appearance, would bear pulling and stretching with impunity.

The aluminous fluids were originally designated by the letter A, and called 1, or 2, as the same weight of the ingedients were dissolved, either in one quart of water or two quarts; they are thus made.

A.—2.

Rock Salt,	4 ounces.
Alum,	2 ounces.
Corrosive sublimate,	4 grains.
Boiling water,	2 quarts.*

The A. 1, only differs from the above in having half the quantity of corrosive sublimate, and water. It is very rarely used, being generally too astringent.

* The *imperial quart* of 40 ounces is intended to be understood throughout the paper, and the weight, avoirdupoise.

B.

Rock salt, ... 8 ounces.
Corrosive sublimate, ... 2 grains.
Boiling water, ... 1 quart.

The corrosive sublimate must never exceed, under any circumstances, two grains per quart of water; otherwise there will be in time a white precipitate on the preparation that cannot be removed, and which will greatly disfigure it.

When the B. fluid is made according to the above receipt, its specific gravity at a temperature of 60° will be 1,100, and with it, terrestrial and fresh water-animals can be well preserved. In cases where it is desired to preserve the *redness* of muscle, it is only necessary to add the nitrate of potash to the preserving fluid—about half an ounce per quart of fluid.

For marine animals, the strength of the fluid must be increased by the addition of salt to 1.148, otherwise they will be decomposed. A great number of marine animals in the first stages of the preserving process require alum, but it must be cautiously used, and carefully watched, and as soon as it has done all that is required of it, the animal should be well washed in clean water and placed in the B. fluid. There is no objection to frequent contact with alum, if necessary, provided the process be conducted on the principle here laid down.

The Arsenical Fluid.—When arsenic is employed for its *softening* properties, it should be used alone, unless the process is likely to occupy much time, and in that case, combine it with the B. fluid, in the following proportions, and call it C—B. fluid, as directed above, arsenic 20 grains. Arsenic can no more be trusted with carbonate of lime, than alum; and if it be desired to employ it on any molluscous animal, the creature should be removed from its shell prior to its introduction to arsenic. The solutions of assenic that I have employed differ in strength from 20 grains, to 60 grains to a pint of water, (imperial measure, 20 ounces) or to the pint of B. fluid. It is not easy to dissolve this mineral, and the only plan which I have found successful, is to place the quantity of arsenic to be dissolved, in a Florence oil flask, with half a pint of water, apply a spirit lamp, and boil till the whole be dissolved. It can then be diluted by the addition, either of more water, or preserving

fluid. One singular fact, of preservation by this fluid, no less of the animal than (which is most important,) its color, occurred to me some years since.

Upwards of ten years ago, my son collected for me several specimens of the larvæ of Cossus Ligniperda, the peculiar color of which had never been preserved. In alcoholic fluid, of any strength, it turns quite black, which is a common result of the application of spirit, for preserving caterpillars; in addition, most insect colors are soluble in alcohol.

The specimens included larvæ of the first and second year, and one fine sample of a three-year larva, about to turn to a chrysalis. Of the former specimens, I preserved some in the A. 2, and the rest in the B. fluid, and placed the last in a solution of arsenic. The aluminous fluid has hardened, and disfigured the caterpillars nearly as much as spirit would have done; they are softer, and in better state for dissecting, in the B. fluid; but they have lost all their rosy redness of color in both fluids, and are partially black.

It was reserved for the arsenic to give me one caterpillar so beautifully preserved, that all its characteristic color, even to the most delicate tint, is maintained to this time. I *believe* that the interior has not been destroyed by the softening tendency of arsenic, before alluded to; because, if so, I think there would be considerable deposit in the fluid, which has not occurred; neither, in that case, would the insect retain its roundness, and fullness, but on the contrary become flaccid, by the removal of those tissues (muscles,) that give form to the integument. As this caterpillar had been secluded from the operation of light, (the fruitful agent for destroying color in animals,) for more than twelve months, I determined to try the effect of constant exposure, to which it was submitted, for three years in England, and six months in this country; its beauty is still unimpaired.

I have been particular in speaking of the successful application of arsenic in the preservation of *color* in this caterpillar, because of its importance. It is most interesting, to collect the larvæ of Lepidopterous, and other insects, as far as possible, but they lose much value for the purpose of instruction, and for collections, unless their color can be permanently preserved; and I have great hopes that the fluid, which has proved so eminently

successful in the instance of the caterpillar of the goat-moth, which takes on the described blackness a very few days after death, in every other preserving fluid, may be equally efficacious in the preservation of color, in the other species.

Mode of using the Preserving Fluids.—A knowledge of the proper method of using these fluds, is essential to success, for in other hands than my own, they have led to the destruction, rather than the preservation of specimens. Men have constantly treated these preserving fluids as though they were using spirit, entirely overlooking one very important consideration, namely: the vast difference between their specific gravity and that of alcohol. In the latter, we have a fluid so light that every animal is *heavier*, and will instantly sink in it; the conditions are exactly reversed in the former case, where every animal, from an animalcule to an elephant, is lighter, and will float upon either of them.

Neither of my fluids, (always excepting the arsenical,) *can be employed of full strength in the first instance*, and anything to be preserved in them, should undergo previous maceration in clean cold water, to which, after a time, preserving fluid may be added, until the animal rises to the surface. The fluid and the water must be intimately mixed, mechanically, or the water will rise through the denser fluid, and retain its integrity for a long time.

The animal will insensibly absorb, and become saturated with the *ingredients* of the preserving fluid, but in a state of considerable dilution; the strength of the fluid must now be gradually increased, and intimately mixed, until the animal again rises, and in time it will become saturated with this denser fluid. In many instances, it is advisable to keep the animal forcibly at the bottom of the vessel, in which it is being preserved, *by weights*, and this is particularly necessary in hot weather, when the preserving process should be expedited with all the speed that is consistent with safety. It is easy to ascertain if the animal be saturated with the fluid, by removing the weights, and in that case, to go on increasing the strength of the fluid—in fine, success depends on carrying out the laws of endosmose and exosmose. The diluted fluid used in the first stages, should be

thrown away, and frequently renewed, as, being replete with animal fluids, it contains within itself the elements of decomposition, and increases the difficulty of success. This remark, however, applies less to the aluminous, than to the B. fluid, as in the former, the coloring matter, and animal deposits of all kinds, so abundantly seen when spirit is used, and which occasions the steady and constant discoloration of that fluid, for, in some cases, many years, and which so generally tends to the disfigurement of preparations in museums, is altogether *insoluble*, from the instant it, or they, come in contact with alum; and for this very important reason, alum may be almost *always* used in the early stage of preservation, the former cautions on this subject being strictly attended to. Preservation of animals, by means of these fluids, then, can only be accomplished by the daily addition of fluid, until the creature be saturated with fluid of the full strength indicated. Nor should the solicitude of the operator end immediately at this point, as it will be necessary occasionally to renew the fluid, and often to test its strength. To shorten this species of labor, I long ago procured a glass jar, or tube, two and a half inches long, and three-fourths of an inch wide, with a flat bottom, to be used as a proof glass. I then adjusted some specific gravity bubbles so accurately, that they *rise very slowly* in the fluid, the precise strength of which they are intended to indicate; if the fluid be weaker than exact strength, they fall to the bottom, and there remain; if stronger, they quickly rise. They are marked on the top, A. 1, A. 2, B., S., the latter indicating a *saturated* solution of rock salt, with which it is convenient to increase the daily strength of the B. fluid, in the manner already described.

By pouriug a little fluid into the small proof glass, and applying a bubble as the test of strength of the fluid that has been employed, the operator will instantly learn, not the exact strength, (which is unnecessary,) but that the fluid is either *the* strength, or weaker or stronger—all the information he needs to guide him in his labors.

Instead of the bubble marked "B," I would substitute two, one indicating 1,100, the other 1,148, and the Italian barometer makers could easily graduate such bubbles. The whole

apparatus is enclosed in a japanned tin box, one inch deep, one and a half wide, and two and seven-eighths long, which can be carried in the waistcoat pocket, and costs but little.

When either of the foregoing fluids are required for the display of preparations in a public or private collection, they should be *well filtered*, and for this purpose, they may be passed a great number of times through fine flannel, jammed into the nozzle of a large earthen funnel, or once through a filtering machine, or twice or thrice through good filter paper. If the filtration be properly performed, these fluids are remarkably bright, white, and brilliant, far exceeding in this respect any alcoholic fluid. Rough filtration may be satisfactorily effected by once passing through the thick flannel used for a jelly bag; but if this be not at hand, it is only necessary to allow the fluids to stand quietly in the vessel in which they were made, until quite cold, then carefully pour off the top, the extraneous matter always found in rock salt will gravitate, especially in the aluminous fluid, which has the property of throwing down anything which disturbs the transparency of water. Neither of these fluids can be retained in open vessels, glass jars, or even stoppered bottles, for any length of time, without additional protection.

To be continued.

New use of Gutta-percha.—M. Manoury, of Chartres, has announced some new preparations of gutta-percha, which promise valuable practical results, consisting of the intimate mixture of different forms of caustic with that article, such as chloride of zinc, potassa, arsenic, &c. &c., of which there are three kinds: 1. Firm caustic plates, which are tenacious, and unchanged by the tissues, and which can be cut into any shape that may be desired. 2. Cylinders, which can be carried in a porté-caustiqué, and which can take the place of sticks of nitrate of silver. 3. Threads, for the purpose of removing certain tumors, by strangulation and cauterization at the same time. He also combines gutta-percha with metallic powders, such as those of iron, copper, red sulphuret of mercury, iodide of lead, &c. Thin plates of this preparation are softened by boiling water, or by gentle heat, and applied upon ulcerated surfaces, hospital gangrene, &c. Cancerous tumors have been successfully removed by the threads of gutta-percha and chloride of zinc.

SPIRIT OF THE MEDICAL PRESS.

On the Influence of Circumcision in Preventing Syphilis.—By Jonathan Hutchinson, Esq., Surgeon to the Metropolitan Free Hospital.

The Metropolitan Free Hospital being situated in a locality in which many Jews reside, its out-patients' rooms furnish a good field for estimating the relative prevalence of different diseases amongst them and others. The following statement of my past year's experience as to venereal diseases, appears to have some importance, and I am induced to communicate it at the present time with especial reference to a paper which appeared in the Medical Times and Gazette, of the 17th, from my friend, Mr. Cooper Forster, recommending the more general practice of circumcision, as a preventive of certain diseases of childhood. My Jew patients have, I believe, been in proportion of nearly one-third to the others. The subjoined table shows the proportion of the two classes of venereal disease.

	Total of Venereal Cases.	Gonorrhœa.	Syphilis.	Proportion of Gonorrhœa to Syphilis
Not Jews,	272	107	105	0.6 to 1
Jews,	58	47	11	4.3 to 1

Thus we find that, notwithstanding a gross proportion of nearly one-third to others, the cases of Syphilis presented by Jews, are only as one to fifteen. That this difference is not to be accounted for, either by their superior chastity, or by their unwillingness to seek medical aid for such diseases, is conclusively proved by the fact that they furnish very nearly half the cases of gonorrhœa. The circumcised Jew is then very much

less liable to contract Syphilis than an uncircumcised person. This conclusion has, I believe, been long entertained by many surgeons of experience, but I am not aware that it has ever before been made the subject of demonstration. No one who is acquainted with the effects of circumcision, in rendering the delicate mucous membrane of the glands hard and skin-like, will be at a loss for the explanation of the circumstances.

Taking then, this fact as established, it suggests itself as probable that circumcision was, by divine command, made obligatory upon the Jews, not solely as a religious observance, but also with a view to the protection of health. Among them promiscuous intercourse was certainly not regarded in the heinous light which it is under the present dispensation, while polygamy and concubinage were openly permitted. One is led to ask, witnessing the frightful ravages of Syphilis in the present day, whether it might not be worth while for Christians also to adopt the practice. Such a proposition, if intended only to protect the sensualist from the merited consequence of loathsome vice, would, it is to be hoped, be dismissed at once by every right-thinking man. But the matter is much wider. In Syphilis, the innocent suffer with the guilty, and the wife and the children often have to bear the penalty of the sin of the husband and father. During the period from which the statistics just adduced have been obtained, I have had under care at the hospital a total of 252 children, under the age of five years. Of these 179 have been of Christian parentage, and seventy-three of Jewish. Among the former have occurred twenty-seven cases of congenital Syphilis, while among the latter there have been but three. Thus it would appear, that but one twenty-fourth of the surgical diseases of Jewish children acknowledge a Syphilitic cause, while no less than one-sixth of those of Christians are of such origin. In this calculation I omit altogether the numerous diseases which are, in all probability, remotely dependent on Syphilis, and comprise those only which present the disease in a well-marked form. The same inferences are pointed out by counting the proportion of Syphilis cases in women. Of a total of ninety-seven women who have, during the year, come under treatment for one or other form of venereal disease, ninety-two have been Christians, and five Jews. Of the ninety-one of the former, no fewer than sixty-one have suffered from Syphilis, and at least two-thirds of these have been married women, who, there was every reason to believe, had contracted the disease from their husbands, without any fault of their own. With regard to its being the duty of the surgeon invariably to remove the prepuce of infants born with congenital phymosis, which Mr. Forster, in the paper referred to, so ably points out, I have long held a similar opinion

with his own. That opinion, together with some reasons for it, are recorded at page 415 of the Medical Times and Gazette, for October 23, 1852.—*Med. Times and Gaz., Dec.* 1, 1855.

Remarkable Convulsive Disease.—At the meeting of the London Medical Society, November 17th, Dr. Winn related the particulars of a remarkable convulsive disease, occurring in a boy nine years of age. The patient was a fresh-colored, but fragile and delicate child, who had been afflicted since infancy with continued attacks of an uncontrollable rotatory movement of the body from left to right. Each paroxysm lasted about ten minutes, and recurred incessantly throughout the day. Occasionally, when the attention was strongly excited, the movements might be arrested, but only for a few moments. If forcibly kept in a sitting posture during an attack, a waving motion of the body from left to right was substituted for the ordinary gyrations. When first seen, the child was suffering from headache, catarrh, and gastric disturbance. Blisters behind the ears, and an aperient were ordered. Dr. Winn saw the child a second time, when no improvement had taken place. Since then he had lost sight of the case. He was inclined to suppose that the affection was owing to chronic irritation of the cerebellum, or one of the crura cerebelli. Lesions of the crura cerebelli were on record, which appeared to establish a connection between rotatory movements of the body and the cerebellum. Dr. Winn was desirous of ascertaining whether any of the members had met with a similar case, or could throw light upon the nature of the case he had related. Dr. Winn said that he made a very careful examination of the patient, but could detect no signs of chronic spasms of any of the muscles of the body. Had such been the case, he should have suspected softening of the brain.—*Lancet.*

Cod-Liver Oil Chocolate.—Numerous attempts have been made to disguise the nauseous taste of cod-liver oil, and to render it more acceptable to delicate stomachs. The chocolate, it is said, is likely to remove the objections heretofore urged against its use. It is odorized with cinnamon, bitter almonds, peppermint, &c., so as to give it an agreeable flavor, and to cover perfectly the fishy taste of the oil. The prepared oil chocolate, it is stated, agrees well with even the most delicate stomachs, and is eminently adapted to all diseases of a debilitating character.

REPORTS OF LOCAL DISEASES.

Diseases in Kalamazoo—1856.

JANUARY.

Scarlatina,	Pneumonia,	Icterus,
Remittent,	Pharyngitis,	Rheumatism,
Intermittent,	Phthisis,	Ophthalmia,
Bronchitis,	Tonsilitis,	Epilepsy,
Cystitis,	Hæmorrhoids,	Diabetes,
Syphilis,	Gonorrhæa,	Goitre,
Anæmia,	Stomatitis Materna,	Gastrodynia.

FEBRUARY.

Jaundice,	Rheumatism,	Laryngismus,
Amenorrhœa,	Typhoid Fever,	Tonsilitis,
Pneumonia,	Cerebro Spinal Meningitis	Syphilis,
Remittent,	Neuralgia,	Gonorrhœa.

MARCH.

Intermittent, (Malig.,)	Rheumatism,	Entero-Colitis,
Remittent,	Gall Stones,	Jaundice,
Nephritis,	Neuralgia,	Syphilis,
Pneumonia,	Bronchitis,	Tonsilitis.
Iritis,		

Above are to be found the varieties of disease occurring in this section, since the first of January last. They are arranged merely in the order of their occurrence in practice. Chronic cases and accidents, obstetrical cases, &c., are omitted.

Scarlatina, of a somewhat violent form, prevailed to a limited extent in December last, but not more than six or seven cases came to my knowledge in January. The disease yielded kindly

to moderate treatment, with inunction of lard as a prominent measure. This, with mild diaphoretics, and solution of chlorate of potash for the mouth and throat, seemed to materially favor resolution of the disease, without unpleasant sequelæ.

Diseases of the respiratory passages were abundant, but remarkably tractable during both January and February. This month, (March,) they are tenacious, but not fatal. I put it down as noteworthy, that I have not found it necessary to use the lancet in any case of inflammation of the respiratory organs this winter. By the way, I fancy "tolerance" of antimony is prevented, by always combining it with Ether, Ipecac, or Sanguinaria. These articles, with opium and its preparations, with now and then a blister, *late* in the disease, have furnished me *ammunition* enough for respiratory inflammations thus far, this year. Mercurials have rarely been called for, though occasionally used.

The intense cold of January and February, carried off a number of old cases of Phthisis, which, singularly enough, had been "cured," by Hunter's twenty-five dollar inhalations.

Remittent and Intermittent fevers have been common during the whole winter—mostly occurring in those who had suffered from one or the other, during the past summer and fall. This month there have been a few cases which have proved fatal, in a few hours from the attack. Of these, I am not able to give particulars.

A feature of the season has been, the prevalence of what, for want of a better term, I have called Acute Jaundice. The prominent symptoms were anorexia, constipation, languor, slight febrile action, a reddish tongue, with the merest film of white fur upon it, gastric pain, vomiting, and then in a few hours marked yellowness of the surface, especially of the sclerotica. Sometimes the yellowness would not appear for two or three days.

Fomentations and sinapisms, externally, with mercurials internally, have readily dissipated the attack, in most cases. Intractable cases have yielded rapidly, to a full dose of dry calomel, followed in an hour by a brisk Emetic of Ipecac and Tart. Antim.

A number of cases of this kind, neglected at the time, have subsequently presented symptoms, and *proofs*, of gall-stones. Five cases of gall-stone have thus fallen under my notice. For these cases I have employed, with satisfactory results, external fomentations; internally, during the paroxysm, a mixture of Sulp. Ether and Sp. Tereb., and afterwards the Mistura Ferri and Comp. and Prof. Mettæüer's excellent aperient solution of Aloes and Soda—(a preparation, by the way, that I cannot too highly commend in very many cases.)

Rheumatism, of the acute variety, has been quite common. Most cases have been speedily relieved in a few days, by free use of a combination of Colchicum, Morphia and Pot. Tart. Antim. My own plan is, to add a grain of each of the two latter, to the ounce of Vin. Colchic, and exhibit a teaspoonful every four or six hours, steadily, until it begins to produce evacuations; then omit till they subside, or are controlled by opiates. Then commence again, and so follow it up. I do not rely upon excessive evacuations, and yet some must be effected, or the result is unsatisfactory. A single dose of Calomel may precede the treatment, but is not absolutely demanded. Blood-letting, in my experience, infallibly prolongs the disease. One case, which resisted other treatment, succumbed materially to Nitrat. Potassæ, one oz., in the twenty-four hours.

Venereal diseases have been unusually common the past winter, which fact may be quoted as instancing the *remarkable* effect that *railroads* have in propagating the disorders of one section of the country to another!

By far the most troublesome cases to be met with in this region, are those attending gestation and lactation. Excessive vomiting, thrush, leucorrhœa, hæmorrhoides, *prurigo pud. mul.*, dysentery, neuralgia, "chills and fever," anorexia, anæmia, excoriated nipples, and mammary abscess, &c., &c.—one or all, seems to be the unhappy lot of most of the prolific portion of the gender. Will some of the more experienced members of the profession throw a little more light upon this general subject, than is done by the book-compilers?

Truly Yours,

J. Adams Allen.

Kalamazoo, March 25, 1856.

Dr. Gorham of Jackson has given us the following report of the remarkable good health of that city and vicinity, during the past month.

DEAR SIR:—Your enquiry of the 17th inst, asking after the health of our Town presents a question, which I can answer in a few words. It has been *distressingly healthy*, severe colds have prevailed, uncomplicated with either local or general inflammation which among the intelligent part of the community has been regarded, as of little account, and required but little medication; in so much, that among the lower class of the people where common sense forms the exception, and *ignorance* the rule there has been a great rush for the "infinitessimals."

Hoping to furnish you with a better report for the next month.

I remain, yours truly, G. W. GORHAM.

Prevailing Diseases of Detroit and Vicinity.

During the past month the ratio of sickness in this locality has been slightly on the increase. The extraordinary degree of health which prevailed among all classes, while the weather maintained its unbroken frigidity, makes this increase more apparent by the contrast which it affords.

Among adults Influenza, Congestion and Inflammation of the lungs have been most frequently met with. The cases of Influenza were generally accompanied with bilious derangement and intestinal irritation—symptoms which, we believe, are often present in this form of disease. Some few cases of Rheumatic Fever have also been noticed. Thus far, these diseases have readily yielded to moderate medication. From adjoining towns we hear of a number of fatal cases of Bilious Pneumonia. It has often been observed that subjects of Autumnal Intermittent Fevers were liable to a recurrence of a like form of disease upon the approach of warm weather the following year. This rule has been amply illustrated during the last two weeks. Many persons who suffered from this form of disease last fall, now find themselves the subjects of renewed assaults from their old enemy.

With children, Influenza, Scarlitina and Paratitis may be said

to have included a large majority of all ailments. Beside these a number of cases of Glandular Swellings followed by suppuration have been observed.

Among lying-in women several severe cases of sickness of a puerperal character have been reported by our city practitioners.

But no marked epidemic influences have been detected of late in this locality.

We venture to express a hope that our subscribers are as much interested in statistical reports of disease, as ourselves, and that they will kindly assist us to carry out our intention by forwarding reports of the preceding month, by the 20th of each month.—EDS.

EDITORIAL ITEMS.

POPULAR IGNORANCE ON MEDICAL SUBJECTS.—Never in the history of the world did *Avarice* reap such a harvest from the marvelous credulity of mankind, as it is doing at this time. Never before did Quackery put on so many forms, or the Charlatan with such unblushing impudence thrust his drugs before the people.

Analysis of the popular mind, with a view to examine its tendencies to vagary, when called upon to judge between *Science* and Empiricism, reveals the *cause* and indicates the *cure* for medical delusions.

Every day's observation teaches us, that, however well-informed men may be on many subjects, they are most lamentably ignorant concerning that which pertains to their physical

well-being. A classical education, or rank in society will not save them; Empiricism knows no *caste*, so long as its victim has *credulity* and *money* left.

The highly educated man, whether in the legal or clerical profession, in our halls of Legislature, or schools of learning, while he may, or may not, become the victim of patent drugs; yet if a "*new system*" offers, whose theory, in scholastic form, is expressed in a short Latin phrase, having the appearance of logical deduction, he is ready to change his family physician at once. The spiritual tendencies, too, of some, are so highly developed, that no amount of intellectual culture will preserve them from the consequences of implicit confidence in spiritualized potencies, or the mysterious power of the *Medium and Clairvoyant.*

The grosser forms of quackery, however, require for their success more *credulity*, hence find their victims chiefly among the lower ranks of society—the more *ignorant*, the more *credulous. Ignorance* then is the most formidable obstacle to the advancement of legitimate medicine; for wherever it most abounds, Empiricism in all its forms is most triumphant.

Now, is the medical profession, as a body, doing as much as it may, to rid the world of this "hydra-headed" *evil?* This is a practical question, and one which deeply concerns every member of the profession, who desires to promote truth—*his own interest* —and to eradicate error.

The antidote for *that form* of *ignorance*, which beguiles and deludes the public, at the same time it contributes so liberally to quackery, is *medical intelligence.* How then is this remedy to be administered? In no way that has yet been devised can it be given better than through *a popular medical literature.* This, we believe, is the appropriate *vehicle*, or medium. Let medical journals be more adapted to the non-professional reader; expunge a few technicalities, if necessary; and devote a liberal space of each number to items, that will attract, *amuse* and *instruct* the general reader.

Divest medical literature of a little of that professional exclusiveness which attaches to it, and which has impressed the public mind, with a dread sense of *mysterious dignity*, more than with the philosophy of health and disease, or the *rationale* of

cure. There was a time in the history of medicine when the *mysterious power* of the "healing art" dwelt in amulets and rings, and incantations of the Egyptian Priests ; it would almost seem that a relict of that ancient barbarism—highly refined—is still visible and reflected in the popular mind. Next to religion, however, there is nothing which should engage the whole public with more vital interest, than Physiology, and the laws governing the conditions of life.

The Mountebanks long since discovered, and have made available, the secret power of diffusing a *kind* of medical intelligence ; almost every bottle and box of their nostrums carrying around them a siren appeal to the *intellect* of their victimised patients. Imparting some knowledge of the process of digestion, the function of the liver, kidneys, the action of the heart, and the circulation of the blood, the phenomena of respiration, and the structure of the lungs ; always taking good care to explain how the all-healing drug *purifies the blood and restores health.* Their monographs and pamphlets abound with charts and diagrams, demonstrating in situ the anatomy of the body, and the relations of the various organs. Does any one doubt the efficacy of such means thus, adopted ?

The objection which has been offered against popularizing medical literature, has been founded on the aphorism, "A little learning is a dangerous thing ;" implying that the reading community will not learn enough from Medical Journals to be of any practical advantage. However much of weight there may have been in this objection in times past, we believe at the present it has but little, if *any,* real force, simply because there is a greater desire on the part of the public to obtain reliable information on medical subjects. If we can read correctly, indications which are patent to every observer, we believe that the world is becoming in some degree satiated with "humbug," in all its forms and phases, which they have taken *ad nauseam.* If this be true, the diffusion of true medical intelligence will tend to correct and elevate the standard of public opinion on this subject, to dispel ignorance and advance the *true* science of medicine. R.

Decision of the Supreme Court respecting the Alternative Mandamus.

Walkers & Russell, Attorneys, for Relator. G. V. N. Lothrop, J. V. Campbell, Attorneys, for Regents.

We copy from the brief of the Counsel for Regents the declaration of the issue involved in the above decision, as follows :

The relator, a private citizen, in the name of the People, obtained an alternative mandamus calling upon the Regents to show cause why they do not appoint a Professor of Homœopathy. Their return sets forth a claim that the relator has no right to appear in the matter, and also a claim of right in the Regents to act in their own legal discretion in the appointment of Professors, and the management of the University affairs, beyond the control, in this regard, of the Legislature. It further shows that, while not admitting the right of the Legislature to interfere, the Regents, out of respect to their expressed wishes, appointed a committee last Spring to take the subject into consideration, and correspond with the various institutions in Europe and America, to ascertain the feasibility of uniting such a professorship with the existing college, and how, if feasible, it can best be done; and where the best man can be found; and that the Committee have not concluded their labors. That from the antagonism between the systems, they cannot act wisely in the matter, if they are bound to act at all, without full deliberation.

To this return the relator demurs.

The court held : firstly, that the Relator was not entitled to move the court for a Mandamus, not having suffered any private injury; and secondly, that the application was premature, as the Regents had not had sufficient time to determine their action in the premises.

On these grounds the Writ of *Mandamus* was quashed.

We feel it to be a matter of regret that this case was disposed of by a legal *quibble*, and that the real issue still remains in abeyance, viz whether the board of Regents constitutes an independent body, endowed with full power to manage and control the affairs of the University, or whether they are held subservient to the dictum of the Legislature, and as such mere tools of the State, moved by "political wirepullers."

Probably we shall hear no more of *legal* proceedings in relation to this disputed question ; inasmuch as a writ of Mandamus can not be entertained unless the Relator, or Relators, have suf-

fered "*private injury.*" If two thirds of the people of the State were to apply for such a writ, the effect would be as insuccessful. They might imagine that they were injured by the non compliance of the Regents, but would fail to *convince a jury* before whom this question would be tried, as a distinct issue.

The subject is certainly a momentous one, as the credit of our State University is not merely threatened, but may eventualy be compromised. It is unfortunate therefore, under existing circumstances that the true position of the board of Regents still remains undefined.

A New Drug-Store.—For a few years past, Detroit has not been behind other cities of the West, in furnishing to the profession pure Drugs and Medicinal Compounds, together with such other appliances as belongs to the *Armamentaria* of the Physician and Surgeon. With some exceptions, our Druggists have deemed it proper and legitimate, to keep also on hand, Groceries, Provisions, and Patent Nostrums. Seldom, so far as we can learn, have *mistakes* occurred in the compounding and putting up of prescriptions—a fact indicative of caution and competency in that department.

The "*New Medicine Store,*" by Higby & Stearns, however, has introduced a new feature in this branch of traffic, excluding "Groceries and Provisions," and *all Patent Nostrums.* This, we think, is an *advance* step—an improvement that will be appreciated by every *educated* Physician. It needs no argument to convince an intelligent mind, that where talent, energy and every requisite qualification are combined, and devoted to the business of furnishing "Pure Drugs, Chemicals, Medical and Surgical Merchandize," exclusively, the wants of the Physician will be better supplied.

We are happy to know that we are not singular in this expression of opinion, as the following communication from one of our most intelligent Physicians will testify:

Messrs. Editors:—If Drugs have any efficacy in the cure of disease, it is certainly of the first importance that they be

genuine and pure. This remark has been suggested by visiting the neat Apothecary Hall, recently established in our midst, by Higby & Stearns, who appear to be properly qualified, in every sense of the word, to conduct a business of this kind. One of the firm, Mr. Stearns, bears well-authenticated testimonials, from the most distinguished members of the Medical Profession of Buffalo. As a member of the new firm, he will regard it as a duty incumbent upon him, carefully to analyze and test, all drugs and preparations before they will be allowed to be sold, or dispensed. And further, it is the intention of the firm, not to employ any person in the establishment, whose duty it will be to dispense Drugs, who is not well acquainted with the *doses*, and properties of medicines, and fully competent to compound prescriptions.

Hoping that this enterprise will be fully appreciated, and well patronized by our Physicians, and the community,

I am, with great respect, yours,

Detroit, March 25, 1856. MEDICUS.

☞ We perceive that some of our contemporaries publish under the heading of "Original communications," translations, of French books; and transfer to their columns whole pages of matter "selected" from works published in the English language. In the simplicity of our hearts we have always believed that an "original communication" referred solely to something written expressly for the book in which it firstly makes its appearance, and that anything *transcribed* or *translated*, necessarily belonged to *selected* matter.

We are so new in Journalism, that we are fain to confess our ignorance on this subject, and beg of our friends to be kind enough to enlighten us in the matter, as it may save us a vast amount of time, and labor, in the conduct of the periodical over which we preside.

☞ We desire to notify our friends that the present number is the last that we can send to *non-subscribers*.

Those persons who desire to receive our Journal regularly, will be good enough to send their names and subscriptions, without delay.

Annual Meeting of the American Medical Association.—The Ninth Annual Meeting of the American Medical Association, to be held in the City of Detroit, the 6th of May next, will convene in the Firemen's Hall, corner of Jefferson Avenue and Randolph-street.

The Delegates are respectfully requested to meet the Committee of Arrangements at as early a period as possible after their arrival, in order to register their names, and receive their cards of Membership. WM. BRODIE, M. D.,

One of the Secretaries of Am. Med. Association.

OUR EXCHANGES.—With great pleasure we enter on the list of our exchanges the following Journals :—

Buffalo Medical Journal.
New Hampshire Journal of Medicine.
Philadelphia Medical and Surgical Journal.
Montreal Medical Chronicle.
North Western Medical and Surgical Journal.
Boston Medical and Surgical Journal.
Peninsular Journal of Medicine.
Nelson's American Lancet.
Western Lancet.
Michigan Journal of Education.
The Medical and Surgical Reporter, Burlington, N. J.
College Journal, Cincinnati.

We have, also, received newspaper exchanges from all quarters, each containing a highly commendable notice of the "*Medical Independent*;" for which the editors will please accept our thanks.

M. Blanchard's Pill of Iodide of Iron.

MESSRS. EDITORS :—The difficulties attending the administration of Iodide of Iron, in all its officinal forms, owing to its deliquescent properties, and liability to decomposition, have led to many attempts among Pharmaceutists, in Europe and our own country, in devising methods by which it might be exhibited in a form at once permanent and convenient.

Among all of the formulas proposed, that of M. Blanchard, a Pharmaciën of Paris, seems to be the most rational, having gained the official approval of the French Academy of Medicine. The "Pilules de Blanchard, à l'Iodure Ferreux Inalterables," are, in France, already the most common form for the administration of the Iodide of Iron, being also very com-

monly prescribed by practitioners in New York, and Boston, where agencies for the imported article are established.

I herewith hand you specimens of the unalterable Iron Pill, as imported, and as prepared by myself, after the formula published in the *Bulletin de l'Acadèmie de Medicine*, which is substantially as follows. It is founded on the volubility of ether, and the insolubility of Iodide of Iron in this vehicle:

Take of Iodine *three hundred and eighty-five grains;* Iron Filings, *one hundred and eighty grains;* Clarified Honey, *seven drachms and fifty grains;* Distilled Water; a mixture of equal parts of powdered Liquorice Root, (decorticated,) and powdered Marsh Mallow Root, of each, *a sufficient quantity.* Introduce the Iodine with *twelve and a half fluid drachms* of Distilled Water, into an eight ounce Florence flask; add the iron gradually, shaking the flask constantly; filter the light green liquor which results, into an untinned iron capsule, (the weight of which is known,) containing six drachms of honey; wash the flask with one fluid ounce of Distilled Water, sweetened with the remainder of the honey, and pour upon the filter; when it has passed, evaporate, at first quickly, then gently, until the *mixture* weighs fourteen drachms and fifteen grains; add of the absorbent powder sufficient to make a mass, which divide upon an iron slab, into twenty parts, rolling each in powdered iron, (by Hydrogen,) then divide each mass into twenty-five pills, covering them with the powdered iron; expose them to a gentle heat, in a dry place, that they may contract no moisture—they are then ready for varnishing.

Make a solution, of one part Balsam Tolu, in three parts of Ether, by weight, and having introduced a portion of the pills into a small porcelain evaporating dish, or other suitable vessel, pour upon them a portion of etherial solution, give the vessel a rapid rotary motion, that the pills may be moistened on every part, and that the ether may evaporate rapidly; as soon as the pills begin to stick together, throw them upon slightly oiled paper, separating those that are agglutinated, and leave them exposed to the air for twenty-four hours; then repeat the varnishing, and finally dry them at a heat not exceeding 110°, Farh.

Each pill contains one grain of Iodide of Iron, and from one fifth to one third of a grain of powdered iron upon its surface. Two to four pills daily, is the ordinary dose in chlorotic scrofulous, tuberculous, and syphilitic diseases. I believe the excellency of this preparation is already well established, and that it should be made generally known to practitioners—and would suggest that you offer the formula for the consideration of your readers. Respectfully,

Detroit, March 20, 1856. Frederick Stearns, *Pharmaceutist.*

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.—Continued.* By HENRY GOADBY, M.D., F.L.S.

While on the subject of eggs it is worthy of remark that the ova of insects possess every variety of form and sculpture, and present a series of beautiful microscopic illustrations. But in the majority of animals, elevated above this class in the scale of being, and in many of the classes beneath it, there is for the most part, although there are exceptions, a remarkable uniformity of plan. The ovum of the *Daphnia Pulex*, for example, itself a mere speck to unassisted vision, and requiring the aid of the microscope to make it apparent, presents an egg which when magnified 300 diametres represents a hen's egg in miniature. The like remark applies with equal force to Fig. 16, and this form is so frequently met with in the animal kingdom, up to the class of Birds, that we cannot but refer it to the operation of some law, which no one has yet attempted to explain.

In the instances adduced, we clearly perceive the identity of the process of the development of plants by cells, and the generation of animals, by the same agency. The *modus*

operandi is so indentical, that it is difficult to detect a point of difference, and this particular period of life in an animal, may, we think, with propriety be called its *vegetative state of existence*, for at this period no *form of animal tissue* has yet been developed.

It is a remarkable fact, that all animals present *a tissue*, which appears to retain its primitive vegetative type, throughout life—this tissue is *Cartilage*. At all ages of the individual, but particularly in youth, the utmost activity appears to prevail in the development of this tissue, *by the agency of cells*. In Fig. 18, is represented the highly magnified view of the Cephalic cartilage of a Tadpole, in which we recognize *primitive* cells, letter *a*, and *secondary* cells, letter *b*. The preparation offers the unmistakable evidence of the spontaneous scission of the cells, on the principle already explained as belonging to the vegetable kingdom.

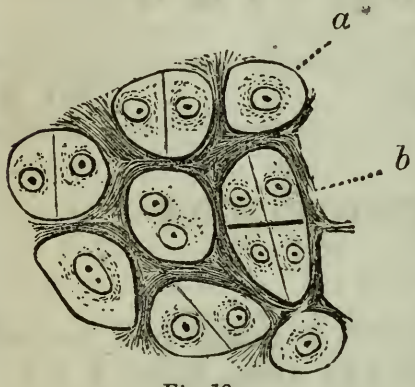


Fig. 18.

We have hitherto described the *Vibratile Cilia;* let us see if such organs pertain to the vegetable, since, if they do, we shall have established *another link of connection*. Any one who will take the trouble during the month of May, and subsequently, in the Summer, or Autumnal months, to examine stagnant pools of clear pellucid water, will discern, especially by the aid of a lens, a number of very minute *green globes*, which will be seen in great activity in the water—these are *volvoces-Volvox globator*. Examined by the microscope, they will be seen as in Fig. 19. We here see a perfect sphere, its external surface covered with minute green dots, each connected to the other by a delicate line. In the interior of the globe, will be seen a variable number of round masses, of an intense dark green color, contrasting remarkably with the diaphanous external tunic. These creatures will be seen to be *loco-*

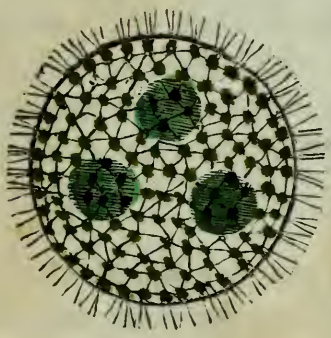


Fig. 19.

motive in a high degree, rolling to and fro, by a rotatory motion, over the field of view, with a steady, equable motion.

The organs of locomotion are of extreme tenuity, which can only be seen with the assistance of a good object-glass, great care and skill in the modification, and arrangement of the light and even then with much difficulty. They are *Vibratile cilia*, and found to arise from the minute green spots, which cover the external surface. By their action, a rolling motion, necessarily results. But what is the *volvox globator?*

Many years ago, it was beautifully and accurately figured, by Ehrenberg, who unhesitatingly proclaimed it an *animal*, and as such it has continually been re-figured, and described, down to our day. It is not such, however; it is an unmistakable plant —a simple *fresh-water Alga.* In this vegetable, we have presented to us the apparent anomaly of a true plant, being furnished with organs of locomotion; and if our space would permit us to pursue the inquiry, we could easily demonstrate, that the same organs belong to a great number of Marine, and fresh-water plants.

When we described these organs in connection with animals, we claimed for them the performance of a triple function; strange to say, two of these functions appear to be identical in this class of plants, viz: locomotion, and respiration. With regard to the performance of the first named function, there can be no doubt; and as respects the second, we opine that there need be as little question. No stomata, (breathing mouths,) have yet been discovered, in these lowly-organized plants—nevertheless, they respire.

It seems to us, that the great object of their being transported hither and thither, through the water, by means of the Vibratile cilia, is to seek for Carbonic Acid Gas—the material which they require for the purposes of respiration—and to this extent, at least, the Vibratile cilia are accessory to a respiratory function. We think, however, that their office does not cease here, but that they are the mechanical agents for the elimination of the material, (Carbon,) the plant requires, from other elements with which it is in contact.

Carbonic Acid consists of one equivalent of Carbon, and two

of Oxygen, and all plants possess the capability of separating the Carbon, which is absorbed by, and enters into, the composition of their several tissues. Aquatic plants offer no exception to this rule, and herein we again see displayed a beautiful provision of Nature, in relation to the exuberant production of aquatic vegetation. For every atom of Carbon that the plant imbibes, *two atoms of Oxygen are liberated*, by which the purity of the water is maintained, rendering it fit to support the myriads of animals, as well microscopical, as otherwise, which always abound in such situations. In Nature, there can be no such thing as fœtid, stagnant water, of any considerable duration, in regard to time. As soon as a pool of stagnant water forms, whole armies of Animals, and innumerable Plants, take instant possession of it; and by their united, unceasing efforts, consume the pestiferous material which, without their aid, would vitiate the atmosphere, and render it incapable to support the life of Man, and the higher Animals.

The dark-green masses of variable size, seen within the *Volvox*, are the cells destined to become perfect plants. It is a very pretty sight to observe that, while the parent cell, rolls back and forth upon the surface of a plate of glass, under the Misroscope, these masses, respectively, are seen to exhibit independent motion within it. The question necessarily arises, how do these immature germs affect their liberation? It will be remembered that, on a former occasion, we stated there were *two methods*, by which the ripe germs of plants were disclosed—one by the *absorption* of the cell-wall, the other by its *rupture*. It is by this latter process that the germs of *Volvox* escape, as represented in Figure 20, where a conspicuous break is seen in the parent cell, and the germ, provided with *Vibratile cilia*, and already containing within its own body, numerous immature germs, has already passed out, and the remaining germs would follow in close succession. How very striking is the analogy here presented in the Plant, to the *Animalcule*, or even to the *Aphides!*

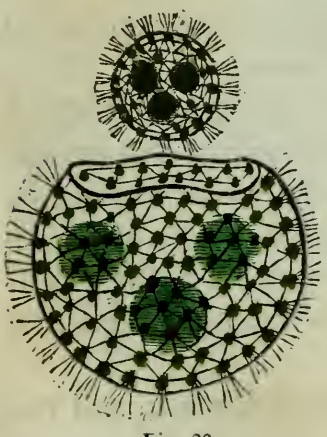


Fig. 20.

During a short and hurried visit at Flint, Michigan, in connection with the "Teacher's Institute," last fall, I was fortunate in finding, in addition to the specimens of *Volvox*, figured and described, which agree accurately with the European species—a singular and beautiful variety, shown at Fig. 21.

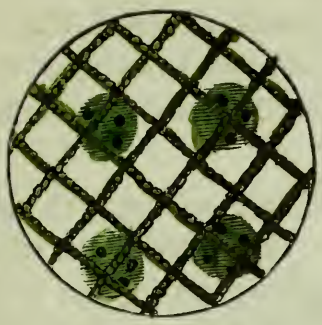


Fig. 21.

It will be seen that this Plant is larger than the former; moreover, instead of its surface being *covered* with green spots, they are arranged in lineal series, crossing each other at right angles, and forming diamond-shaped interstices. The examination of it was hasty, and its Vibratile Cilia was not discovered—but the probability is, that they also, were based upon the spotted surface.

If the *lower stratum* of water be obtained from a stagnant pool, including of course, Conferva, or other vegetation there found, a number of organisms, amongst the meshes and vacant spaces in the water, formed by the disposition and accidental arrangement of the plants will be discovered. These, (whatever they may be,) will be found of all sizes, from very minute, to comparatively large. Some are green, in portions of them—others of a uniform greyish color, and differing as widely in *shape*, as they do in *size*, to each other. Two specimens, thus obtained, are exhibited at Figures 22 and 23. Examined by the microscope, they are objects no less of beauty than interest. When first seen, the probability is, that they are perfectly quiescent; presently, however, they will be seen to move one end, progressing slowly in a

Fig. 22.

Fig. 23.

straight line, by a continuous, gliding kind of motion. Then it stops; presently the other end goes first, and the body is carried back to the place it formerly occupied. Stiff and unyielding, it can move only by urging, now one end foremost, and then the other; it cannot move in a lateral direction. It does not appear to be susceptible of irritation from external circumstances; nothing can accelerate its speed; it never exhibits but the like uniform, gliding motion. These objects have also been figured by Ehrenberg, and by him ascribed to the animal kingdom.

Amidst the difficulties which beset us, in common with other Naturalists, in discriminating between the individuals which belong to the Animal or Vegetable kingdom, we incline to the opinion, that there is yet one broad line of demarcation left to us, viz: *excessive irritability.* Notwithstanding a nervous system has not, and cannot be seen under any circumstances, in the lowest members of the animal kingdom, yet we have the most distinct evidence of its existence in some form. Without its instrumentality, animals would necessarily become as passive as plants, whereas we know that microscopical revelations declare to the contrary. We have already directed attention to the remarkable irritability constantly displayed by the whole class of Animalcules, and we regard a total absence of such exhibition, amongst the conspicuous proofs of Vegetable life. The creatures under examination, if belonging to the animal kingdom at all, must be placed in the class of "Microscopical Animalcula" and if so, we can only say that they are totally devoid of the characteristic, which form a prominent feature of the class to which they are supposed to belong. The land-marks of the Naturalist, as they once existed, are swept away; by insensible and slow, but certain degrees they have gradually paled before the light of modern Science; and now even *locomotion*, that served for ages, as the never failing adjunct of an animal, is also gone, and we are consequently thrown upon other fields of research, for resources of an infinitessimal character, to define with accuracy and precision, an animal from a vegetable.

The entire absence of any irritable manifestation, renders it certain that these objects are not animals, but plants; and in

them locomotion is affected by the aid of *Vibratile cilia.* The interior of figure 21 is of a most refreshing green color; and the stripes, or parallel lines, with a faintly spotted centre in the other figure, is also of the same color. They are called *Closteria,* and every stagnant pool of water, irrespective of its dimensions, offers no end of species and varities of *Closterium.* The attempt to find them will be in vain, so long as the *upper stratum* of the water be alone examined; they must be sought for at greater depth, as they repose *on the surface of the mud at the bottom of the pool;* to make sure of them, it is a wise plan to collect some of the bottom, and, after permitting them to stand long enough for the water to become clear, they can be collected with a dipping tube, and examined with ease.

The development of the Vibratile Cilia, in the vegetable kingdom, does not terminate in the species of plants, in which we have demonstrated them. The species of Conferva, (Zygnema, already described, pages 10, 11.) together with other species, not described, the majority of the *Marine Fuci*, the Marine and fresh water Algæ, possess locomotive (and probably *respiratory,*) organs of the like kind.

There cannot be a more curious and interesting sight than to witness a whole field of Conferva simultaneously in motion! The plants are seen crossing each other in every conceivable direction, all exhibiting the like slow, gliding, equable motion; after a while locomotion begins to cease, and the Microscopist is left in possession of the field, quietly to pursue his investigations.

Thus we have endeavored to show the identity of cells, developed alike in the animal and vegetable kingdoms. We have, also, analyzed the microscopical appearance of the cell-wall in the two kingdoms, and, we trust, we have shown conclusively, that although there is a chemical difference existing between the *cellulose* or *simple membrane* of the plant, and the *simple membrane of animals,* nevertheless the microscopical characteristics are the same. Secondly, we have endeavored to show the nature of the division of the nucleated mass contained within the vegetable cell, (Conferva) ; and we trust we have succeeded

in demonstrating a similar parallelism in the animal kingdom, (Animalcules.) We have also directed attention to the principle of *multiplication of cells* in the vegetable, as seen in the Cucumber; and we have shown a corresponding condition in the development of yelk-cells in the class of animals, (Daphnia, Mollusc, and Moth.) Lastly, we have shown the identity of *Vibratile cilia* in the two kingdoms; moreover, we venture to hope that we have satisfactorily assigned the functions of these organs, as they exist in one class, and applied them, with propriety, to both.

We shall now proceed to examine another phase of our subject, and see if we can find a further development of a kindred product, as being common to both kingdoms. Certain cells of the *Cereal grains*, and of other vegetables, are developed expressly (as before mentioned), for the reception of special contents, viz., *Starch*. If we make a thin section of the potatoe, and place it under the microscope, we shall perceive a dense net-work of cells, intimately filled with beautiful, glistening bodies—these are the corpuscles of Starch. Examined with care, we shall find that the utmost irregularity of size prevails; scarcely two in the same cell being of the like size. By this arrangement, each cell is filled to repletion with these bodies—large, small, and intermediate in size—leaving no vacant space.

The microscopical characteristics will be found generally present in the various species of Starch, and as far as they extend are reliable. An equally satisfactory test of the presence of Starch is the chemical one, (Iodine,) described at page 3. Figure 24 gives a view of a thin section of Potatoe, the large well formed cells, being filled with corpuscles of Starch.

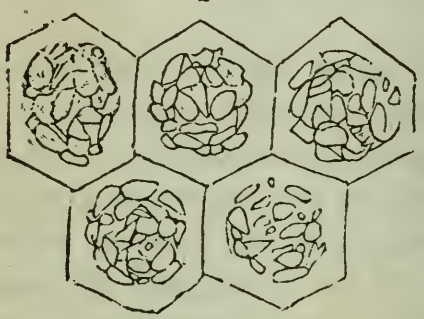


Fig. 24.

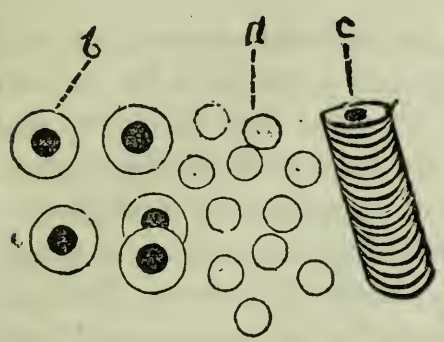
To be Continued.

ARTICLE II.—*Value of the Microscope in the Diagnosis of Tumors.*

In St. Mary's Hospital of this city, Dr. Pitcher lately had under his care, a patient suffering from a Tumor of somewhat remarkable character, or we may say with more propriety, that it is remarkable for its want of character.

The Doctor examined it by the aid of the exploring needle, and sent the product to us, for Microscopical analysis. The first glance at it, put us in possession of its present history, and inasmuch as it is confirmatory of the views we have already enunciated, in connection with this subject, we think the details in brief, will be interesting to our readers.

We transcribed the Microscopical appearances at once, and have recorded them in the accompanying illustration; *b* represents the colored corpuscles of the blood, showing the nucleated central spot, which, under some circumstances of examination, is rendered apparent; *c* indicates a pile of these corpuscles, in the condition of *rouleau*, which, whenever present, is, as will hereafter be seen, significant and characteristic; *a* represents corpuscles of a perfectly transparent character. These are the colorless corpuscles of the blood; and their number was *very considerable*, indicating great activity of the Tumor.



It forcibly reminded us of the exhibition of the web of the Frog's foot, when artificially inflamed; which produces a sudden rush of the colorless corpuscles from all parts of the web to the point of injury. Acting upon this analogy, we predicate that blood taken from any other part of the patient's body, would exhibit comparative deficiency of these corpuscles.

The examination, per exploring needle, therefore, clearly demonstrates that this is *a vascular tumor*, as we have the full exhibition of blood in all its integrity—both the elements being present—and nothing superadded. The aggregated corpuscles before referred to, and shown at *c*, indicates inflammatory action.

It is a peculiarity of inflamed blood to collect, and arrange the corpuscles in a linea series, as represented in the figure. We believe that the inflammation was restricted to the tumor, as evinced by the extreme tenderness exhibited from manipulation, and think these *rouleau* would not be found in blood, taken from any other situation.

We regard the inflammation as strictly local. The report we gave of this tumor, from the deductions of the microscope was as follows—firstly, that it is highly vascular; secondly, it is extremely vigorous; and thirdly, if an operation be contemplated, it should be performed without delay.

Referring our readers from the above figures, to those we published in connection with a "*post mortem* examination," (page 35) it will be obvious that no degeneration exists in this tumor.

The diagnosis, it appears to us, is rendered obscure from the fact of its retaining *its normal type.* It appears to be so well supplied with nutriment, that it continues to grow, and flourish—thereby confirming what we have said on this subject.

There has been no opportunity, of *degradation,* or *degeneration,* and if it existed the tumor would at once acquire a name, but what name, it would then bear, whether Scirrhous, Fungus-hematodes, or any other of the several designations employed, would depend upon the characters it ultimately assumed. It *might become* any of these, or a combination of some of them.

Since our examination and report, we have heard its history, which is as follows.

The tumor extends from a little above the knee, down to the middle of the Tibia, including the knee joint. It is extremely sensitive to the touch—the patient can scarcely endure a fair examination of it. It is apparent that any operation for its removal, must necessarily involve *amputation* of the limb, and to this the mother objects.

Moreover a tumor, to all appearance similar has formed on the other knee, and she (reasonably) fears, that he would have to lose both his limbs.

The case points directly, as we think, to the unsatisfactory character of the nomenclature of tumors, as received, and

taught at the present time. Based, as the modern system of classification is, upon characters derived solely from their degradation, there appears to be no appropriate place for this tumor.

Without the aid of the microscope no knowledge of its real character could have been obtained, and we regard this as another of the many triumphs achieved by this invaluable instrument. H. G.

Article III.—*On the Predisposing Cause of Fever.*

A great deal has been written, at various periods of the world's history, upon the subject of Fever, and many attempts to describe the causes from which this malady is supposed to take its origin, have been faithfully recorded. The various theories, however, do not appear to be sufficiently satisfactory, to have settled the question.

Are not the *real causes* of a more simple and natural character, than those which elaborate hypotheses have aimed to establish? It may be that our own ignorance is more at fault, than the learned writings of authors; but the majority of them are so transcendental that it is not easy to comprehend their meaning.

It is difficult to understand the *modus operandi* of Miasmata, Electrical phenomena, Azotic materials, and the numerous other alleged exciting causes.

But when we consider the array of distinguished names, who have achieved fame in multiplying works on the causes of fever, we approach this really abstruse subject with much diffidence.

Our primary object in submitting this paper to the consideration of our readers, is for the purpose of contributing the evidence of the microscope to the elucidation of this topic.

In the course of our labors, we have examined the characteristics of blood, as revealed by the microscope, very many times; and have studied the phenomena of the circulation in the web of the frog's-foot, for days and weeks in succession. The result of these examinations has led to the conviction, that a certain normal condition of the blood is essentially necessary

to equalize or regulate the circulation. We mean, in other words, that blood flowing at a given, but variable rate of speed, in the bodies of animals respectively, the normal condition, referred to, must exist, or the blood will flow with increased, or diminished activity.

It is well known that blood consists of *fluid* and *solid* elements: the fluid portion is the Liquor Sanguinis; the solid portion consists of the colored and colorless corpuscles.

The chemical analysis of the Liquor Sanguinis demonstrates, that in a normal state of the blood, a certain quantity of *albumen* and *fibrin* is held in solution. These facts we have had occasion to refer to, in our article "on Tumors," (page 17) especially as regards what becomes of the excess of these materials, (in our opinion,) whenever they chance to be present. Let us suppose, however, that there is not only no excess, nor even a normal quantity, but a positive deficiency of these elements in the Liquor Sanguinis; what must of necessity be the result? Evidently, *a great increase of the circulation*, and for the following reason: the fluid portion, has lost its equalizing or controlling power, it has become specifically *too light*, and consequently the flow of the corpuscles is greatly accelerated. *Hence, we believe that while an excess of the colorless corpuscles may produce abnormal growths, a deficiency of them may be the predisposing cause of fever.*

We are not quite certain but that, the Liquor Sanguinis, possesses the power, under such circumstances, of dissolving the colorless corpuscles which it contains, thereby endeavoring to maintain its own specific gravity. We think it not only possible, but probable, that such capability is resident in this fluid, otherwise it is difficult to account for the total disappearance of them in certain diseased conditions. For example: in the blood of fever patients, which we have often examined, a strong conviction impresses us, that the blood is remarkably deficient in this particular element. There can be only two modes of accounting for this deficiency: either that the Liquor Sanguinis has re-dissolved the corpuscles, which were present when the blood was in its normal state, or a want of power to continue their production. We believe that both these causes are ope-

rative in fever, especially the latter. The fibrin and albumen found in the blood, is a common and necessary product of nutrition; and in proportion to the health of the individual, and the power to digest food, will be the capability of producing these fibrinous and albumenous elements.

We believe that the *function of nutrition* is firstly impaired; no attention is paid to its premonition; in the mean time the colorless corpuscles are lost, the speed of the circulation is consequently increased, and we have all the phenomena of fever established.

The function of the stomach being prostrated, it has lost the power of eliminating the fibrin and albumen from the food; as a consequence, it fails to furnish those constituents to the blood. The Liquor Sanguinis, therefore, is gradually reduced in its specific gravity, until it becomes a *thin and watery* fluid; necessarily therefore, the solid materials of the blood, being liberated from their accustomed restraint, *i. e.* no longer kept in check by the specific gravity of the fluid portion, flow at a greatly increased rate of speed.

The normal condition of the blood is therefore lost, and such blood circulating to every organ of the body, produces depressing effects—in fact, the characteristics which we call fever.

It happens that the physician's enquiry concerning the history of the case, almost invariably developes the fact that the patient suffered an ill, or indifferent state of health for several days previously, usually complaining of his *stomach*, indigestion, loss of appetite, irregularity of the bowels, and function of the kidneys—in fact all the symptoms generally referred to defective nutrition. In such condition of things, it must be obvious that the *secretions*, and *excretions*, exert a deleterious influence by their retention; exhalations which should be thrown off by the skin, and the excrementitious matter that should have been evacuated, become absorbed, therefore tend to depreciate the character of the blood. With such innutritious fluid circulating through the brain, no wonder that the functions of life are depressed and prostrated.

It is in such a condition that we can understand the current expression of "*diseased blood;*" so often made available in the

appeals of quackery to popular credulity. On the other hand, we cannot understand that the blood can become *primarily diseased, by any other agency than through the instrumentality of the stomach alone.* The success attending the administration of "Infinitessimal doses," is based upon the theory herein proposed. While they can do nothing specifically, yet they do *much* by suspending food of all kinds, enjoining perfect rest, and affording the stomach every opportunity to recover its lost energies.

The conditions necessary to produce fever, once established, may lead to the development of any form of it—subject to various modifying influences; for example, idiosyncracies, peculiarity and manner of living, attention to dress, the effects of particular localities, and the miasmata belonging thereto. These may, and probably do, determine the type, and more or less contribute to its severity.

We believe that the legitimate and successful practice adopted in the treatment of fever, confirms the views which are based upon the the teachings of the microscope, and therefore, are most reliable. H. G.

ARTICLE IV.—*Address, delivered before the Livingston County, N. Y., Medical Society, September* 20, 1854. By W. E. LAUDERDALE, A. M., M. D. *

GENTLEMEN, MEMBERS OF THE SOCIETY:

The duties imposed upon me, as your presiding officer, as well as usage, requires at my hands the presentation of some appropriate topic for our mutual interest and profit, on this occasion. It seems to me, that something of a practical nature, suggested by professional observation, will prove more acceptable than anything merely theoretical. I have concluded, therefore, to adopt as my subject, a consideration of the disease known as *Dropsy of the Amnion;* and will endeavor, very briefly,

* This Address was prepared for a special purpose, but at our solicitation, was kindly furnished by the author; and although not written with a view to publication, we doubt not our readers will regard it well worthy their perusal, and a valuable contribution to obstetrical literature.—[EDS.]

to give the opinions of such writers upon the subject, as have been within my reach; also, the details of a few cases that have come under my own observation, with such remarks as experience may dictate.

That errors do often occur in the *diagnosis* of diseases of rare occurrence, as well as in their treatment, is not surprising. This, in fact, offers one inducement in the selection of my subject. I was called, in the summer of 1851, to see an interesting case of this disease. My first diagnosis was incorrect, and in the investigation and treatment of the case, I discovered that I was not as well "posted up" in the diagnosis of such cases, as I might have been. Again, in referring to writers on the diseases of women, I was disappointed in not finding the subject as fully treated of, as its importance seemed to demand. Fortunately, in searching authority, I found in Braithwaite's Retrospect, a case as reported by Dr. Toogood, which bore a striking analogy to the one above mentioned, and materially assisted me in correcting my diagnosis, before any error had occurred in the treatment of the case.

In our *diagnosis* of diseases of women in pregnancy, we cannot be too cautious, for the disease in question bears so strong a resemblance to Ascites, that a superficial examination might lead to an error, and the operation of Paracentésis—when the disease is *Dropsy of the Amnion*—would greatly disappoint the practitioner, as well as endanger the life of the patient.

Causes.—According to the opinion of Dr. Lee, and others, this disease may arise from some constitutional diathesis, such as Dropsy, Phthisis, Scrofula, or some unhealthy condition of one or both of the parents, or from a diseased state of the Fœtus, or its appendages, independent of any constitutional disorder of the parent—the cause of which is involved in obscurity.

Merciér, who wrote an article upon the subject half a century ago, arrived at the conclusion, from an examination of several cases that came under his observation, that the disease was invariably the result of inflammation of the membranes of the Amnion. Later writers, (and among them Robert Lee,) who

have examined the membranes with care, have not been able to discover any traces of inflammation in them.

Diagnosis.—The diagnosis of this disease is somewhat difficult, especially in those cases complicated with Ascites, and where effusion has taken place to a large extent, in both of which cases, fluctuation can be distinctly felt, on percussion of the abdomen. But we cannot, from this symptom alone, determine whether the water is contained within the cavity of the Peritoneum, Amnion, or both of these membranes together.

In the simple form of the disease, where the accumulation is not large, the fluctuation is more or less obscure, or entirely wanting; and that this form of disease may be overlooked, is not to be wondered at. Burns says, that we may know that the water is contained in the Uterus, and not in the abdominal cavity, by feeling the shape and firmness of the Uterus, and by the greater obscurity of the fluctuation. In Ascites, complicated with pregnancy, he further says, the fluid is more distinct, and the shape of the Uterus cannot be perceived, until after tapping. This diagnosis of Burns' may be true, to some extent, but so far as my observation goes, is not invariably so; for I have seen fluctuations as distinct in the case of Dropsy of the Amnion, as I ever saw in Ascites.

The most reliable test in our diagnosis of this disease—whether in the simple or conplicated form—should be the indications founded upon an examination per Vaginam.

An abnormal accumulation of water in the Amnion, may usually be detected by the increased size and prominence, or depending state of the Os-Uteri—the Cervix being, generally, obliterated at an early period, by the *ballottment* of the Fœtus —by the fluctuations felt in the Vagina, upon percussing the abdomen. In cases of Ascites, which occur during the period of gestation, we do not find the same prominence, or elasticity of the Os-Uteri; nor by placing the end of the finger upon the Os, and percussing the abdomen, can fluctuations be so distinctly felt as in the former disease.

I had an opportunity of witnessing Ascites. complicated with pregnancy, in this town, in the case of Mrs. R., upon whom I performed the operation of tapping, one week previous to her

confinement. I observed, in that case, that the outlines of the Uterus could not be very distinctly traced upon the abdomen, on account of the fluid interposed between the Uterus and the abdominal parieties. I also discovered that the Os-Uteri was situated high in the Pelvis, with no particular elasticity, or fluctuation, upon percussion of the abdomen, as in cases of Dropsy of the Amnion.

In Amniotic Dropsy, the epigastric region is unusually prominent in the latter stages of pregnancy, and fluctuation is not only apparent to the touch, but actually *visible*, on account of the extreme attenuation of the walls of the abdomen. In cases accompanied with Anasarca, this peculiarity might not be visible, in consequence of the infiltration of Serum into the cellular interstices, thereby rendering the parieties too dense to admit of perceptible fluctuation. In forming our diagnosis, therefore, the greatest reliance may be placed upon the indications derived from a careful examination per Vaginam, and in no supposed case should an opinion be hazarded, without such examination.

Another symptom, which should not be overlooked, is the *unusually rapid development of the Uterus.*

This disease is unfavorable to the health of the child—in every instance that has come under my observation, fatal. In some cases, we find an unhealthy and deformed child; at other times, well formed, and to all appearance healthy—but if living at birth, we may safely conclude upon a short and feeble existence.

Treatment.—This disease, being insidious in its early stages, and frequently complicated, is liable to be overlooked; but when we have unmistakable indications of its presence, and the patient will bear constitutional treatment, such as Antiphlogistic remedies, Cathartics, and Diuretics, we should attempt to arrest its progress. In those cases where it has once manifested itself, we may adopt measures to prevent a recurrence. In the more advanced stages, we shall probably fail to procure any reduction of accumulation—especially so, if there is a diseased state of the Fœtus, or its appendages. When the system of the mother is at fault, through constitutional taint,

advantage may be derived from Tonics, sea-bathing, moderate exercise in the open air, and a generous diet, with a view of sustaining the general health, until after confinement. The operation of Paracentisis, which was recommended, and even practiced by some of the older physicians, has become obsolete; and instead, the operation of puncturing the membranes of the Amnion, through the Os-Uteri—thereby inducing premature labor—is now advised. This also gives an opportunity of treating, more scientifically, those patients in whom there is a complication of Ascites, or Anasarca, and affords a better chance for the safety of the child.

In reference to the proper time, we must be governed entirely by circumstances, always considering the life and health of the mother of paramount importance. Whenever the general health of the mother begins to suffer, on account of pressure, and restlessness and Dyspnea occur, no time should be lost before labor is induced, by discharging the waters of the Amnion.

Cases.—In the enumeration of cases, I shall be under the necessity of relating some from recollection, no notes having been taken at the time of the first three cases—and as they occurred in one individual, and were similar at each time, I will mention them collectively.

In the years 1833, '35 and '38, I witnessed the disease at three different times in the person of Mrs. W——, aged about 37, at the first time. Mrs. W—— was predisposed to Dropsy, had been troubled for years with Anasorca, before the above dates. Her confinement at each time took place at the full period of Utero gestation. She was very large, swollen and uncomfortable before each confinement—usually about two weeks before the full term of gestation, she was attacked with a shivering fit, and cessation of the motion of the child immediately followed.

From this time she had fever, and experienced great discomfort till labor took place. The discharge of water at each time was very copious, the labor was rather severe, the children stillborn, but, to all appearance, healthy, and well formed, weighing, on an average, not less than nine pounds each. Profuse hœmorrhage invariably followed, from the prostration, of which he slowly recovered.

Now, what objections could have arisen in the above cases to rupturing the membrane and inducing premature labor, while the children were still active? Would there not have been a reasonable prospect of saving them, very much to the gratification of the parents, and not only without any risk to the mother, but actually to her relief? I am sanguine in the belief that her health would have been benefitted and the chances of life in the children increased. Should an opportunity again offer I would advise such a course.

Case 2d.—The next case that I would mention, and much the most interesting one, I ever saw, occurred in this village in August, 1851. Patient was Mrs. C——, aged 36.

I was first called to see her early in the morning of the 27th, of that month, in consultation with Dr. Bissell. She had been the mother of eight healthy children—was constitutionally predisposed to Phthisis—was about eight months advanced in pregnancy—had been unusally large, and uncomfortable from nearly the commencement of her pregnancy; as she advanced, she suffered more than at former times, with pressure, sickness of stomach, and general disturbance of all the functions.

Finally, she called in Dr. Bissell, he had given her some Diuretics and Cathartics, also, Anodynes, without any perceptible advantage; the symptoms were growing worse every day. I found her in a sitting posture, unable to lie down, suffering greatly from Dyspnœa, almost amounting to suffocation whenever she assumed the recumbent position; there was an anxious expression of countenance—limbs and face emaciated, the Dyspnœa so great that it was necessary to keep the windows and doors open all night—she required the constant use of a fan—retching and vomiting whenever liquids were swallowed. The Urine was scanty, and not increased in quantity by the Diuretics. Her pulse was 120 in a minute; the abdomen was enormously distended, and fluctuation was evident over its whole surface upon percussion; so attenuated had its walls become that the fluctuation was actually visible.

My first impression was that we had a very plain case of Ascites, and did not hesitate to advise an immediate operation of Paracentesis; in corroboration of the correctness of this prac-

tice, I referred the Doctor to the case of Mrs. R——., on whom I had performed the operation of tapping just one week previous to her confinement, very much to her advantage, and contributing to a speedy recovery. I suggested if there was propriety in tapping Mrs. R——, there certainly was much more in this case. We concluded, as neither of us had a Trocar, to leave the patient under the use of Stimulants, with some Anodynes, and call again after breakfast. In the morning we devoted some time in referring to writers upon the "Diseases of Woman," but failed in finding any thing satisfactory, until we discovered a case in "Braithwaite's Retrospect," as reported by Dr. Toogood, which appeared quite analagous. This was a case of "Aminotic Dropsy," supposed, at first, to be Ascites, the patient being relieved by inducing labor. We called again to see our patient; found no material abatement of the symptoms; began to have some misgivings as to the propriety of tapping. Dr. B. suggested that even if the disease proved to be Ascites, there would be an advantage in inducing premature labor, for the patient would sooner be relieved, and could be more advantageously treated for that disease, after confinement, than before. If, however, the disease should be a collection of water in the Uterus, it was evident that tapping would be hazardous.

We again left our patient for further deliberation. She continued through the 27th without any perceptible change.

On the morning of the 28th, Dr. B. was called away to be absent several days, leaving the patient in my charge, with the advice that if I found her no better on my next visit, and, also, if, on further examination, I became convinced that inducing labor was the best plan, under the circumstances, to lose no time in relieving her.

Called again on the morning of the 28th, found the patient no better; her sufferings appeared almost insupportable. I stated to her our decision; she expressed a willingness to submit to any operation that would give her relief. I made an examination per Vaginam; found the Os Uteri dependant, full and elastic. Percussion upon the Abdomen caused an impression of fluctuation to the finger in contact with the Os Uteri.

Ballottement distinct. All doubts being now removed, I placed her on the edge of the bed in a sitting posture, with her feet out, and with a male Catheter, ruptured the membranes. A free discharge of water followed, but the size of the Abdomen not being materially diminished, I made a further examination and discovered another bag of waters presenting. This I also ruptured, when a much more copious discharge followed; the greater part of the water was received in a vessel, and measured over six quarts. There was now quite a subsidence of the Abdominal prominence, the patient could lie down; the Dyspœa had disappeared, and she could retain her drinks. I left her comparatively comfortable; she got some sleep. In about two hours I was again called; labor pains had commenced and were becoming quite decided and regular. Made an examination, found a face presentation, with the posterior part of the head thrown back upon the shoulders. Finding that the pains were not sufficiently strong to propel the child in so unfavorable a position, I sent for my Forceps and delivered her. In the course of half an hour, another child presented, and was also delivered. The children were still-born; the first one was rigid in the shoulders and arms, and exhibited some signs of life when born. The second one was flaccid, and apparently feeble; their aggregate weight was twelve pounds.

The patient was safely placed in bed about 4 o'clock, P. M.; six hours after, the membranes were first ruptured. She was considerably exhausted, recovered slowly, and was not able to resume her domestic duties for months.

Case 3d.—I will only mention one more case that occurred in the Town of G——, about three weeks since, under the care of Dr. Joslyn.

On the 29th of August last, I was called, in consultation with the Doctor, to see a Mrs. G——, who was about seven months advanced in pregnancy, and had complained for several weeks past of pain in the Abdomen, particularly on the right side, accompanied with a disagreeable sense of fullness and suffocation. The Doctor had been called about a week previous, when she had every appearance of premature labor, with a discharge of water from the Vagina. The Doctor waited some time, with the expectation that labor would commence, but instead, the pa-

tient became quiet, and he left. He was again called in the evening of the 28th, found her in labor ; he made an examination, and was surprised to find the Uterus prominent and elastic, with a bag of waters presenting, which, on his former visit, he supposed was discharged. The strength of the pains increasing a rupture of the membranes took place, the bed and clothing were literally deluged. The child was soon born, deformed and rigid in the limbs, weighing about three and a-half pounds.

After the birth, there was complete collapse, with great prostration and hæmorrhage ; there were no expulsive efforts to detach Placenta. The Doctor directed his efforts to keeping up the strength of his patient, and preventing loss of blood, by elevating the hips ; by Tampon, and occasional friction over the region of the Uterus. He also administered Ergot in decoction ; considering his patient in a critical situation, he sent for me in consultation. I arrived about 9 o'clock, A. M., on the 29th. The means that had been used had arrested the hemorrhage, by producing a partial contraction of the Uterus. Efforts were now made, by the further use of Ergot stimulants and friction, to produce contraction, and expulsion of the Placenta, which was found, on examination, to be firmly attached. An effort was then made to introduce the hand and detach it ; but on account of the contracted state of the Uterus, it was found impracticable. Finally, Chloroform was administered, which had the effect to produce sufficient dilitation to admit the introduction of the hand, and detachment of the Placenta. The patient, although greatly exhausted, gradually improved, and is now convalescent.

If we may regard the result of this latter cure as the method which Nature chooses to get rid of diseased Uterine contents thus prematurely, why should we not consider it an indication of the plan for directing our remedies, in all like cases ?

If, gentlemen, our consideration of this subject should have the effect of keeping before your minds the *Diagnostic Symptoms* and *Approved Mode of Treatment* of a disease, though of rare occurrence, yet sometimes perplexing, my highest object will have been fully attained, and your time, I trust, not unprofitably occupied.

Geneseo, N. Y.

ARTICLE V.—*Veratrum Viride in Dysmenorrhœa.*—By G. W. GORHAM, Jackson, Mich.

Having had quite a number of cases of Dysmenorrhœa, and no little trouble in managing them with Narcotics, Antispasmodics, Sedatives, &c. I concluded to try the virtues of *Veratrum Viride*, adopting the theory of Ashwell, that it was either a congestion or Neuralgic affection of the Uterus, having had some experience in the treatment of Inflammation and Congestion with V. Viride.

I commenced its use in a case, presenting, as I believed, a *Neuralgic Dysmenorrhœa.* Her age was twenty-nine years, of sallow complexion, delicately formed, nervo-bilious temperament. Had suffered the most excruciating pain for the last five years, at each return of the Menstrual period ; during which time she had been subjected to a variety of treatment, which, in some instances, had proved merely palliative.

She had been the victim of those *nicely labelled drugs*, which flow from the great fountain of humbug, (N. Y. city,) and even of *misplaced confidence* in the faith of "Sugar Pills." I commenced the treatment ten days previous to the expected period, with *three* drops of Norwood's Tinct. V. Viride, given once in three hours, with directions to increase one drop at each succeeding dose, until nausea came on, which occurred with the seventh-drop dose, at which time I saw her ; finding her very much nauseated with some retching, pulse forty-eight, skin cool and moist. Directed her to continue the four-drop dose ; and saw her again three days after ; found pulse fifty-four, soft and full ; directed same dose continued, and visited her on the day of her expected return of the Menses ; but they did not appear until the third night after, at which time the flow commenced, without the least pain, and, in fact, without her knowledge until in the morning, four days after the looked-for time. I found her free from pain, and all that peculiar restlessness, which she had suffered at such times ; pulse fifty-six.

Second Case.—Was a married lady, nervo-sanguine temperament, aged twenty-five. Had given birth to one child, and aborted, one year after; since which time she had suffered with Dysmenorrhœa.

I commenced with same treatment six days before the expected period, three drops as before ; she sickened at the six-drop dose, at which time I saw her. She appeared much exhausted ; had vomited freely ; skin cool and moist ; pulse forty-six, quite full and soft. Continued three drops once in four hours. Her menses did not appear until four days after the expected time, and at this time I saw her again ; found pulse sixty-one, skin cool, and no pain, since which time she has had three returns, at the regular period, unattended with any of the symptoms of Dysmenorrhœa.

My *Third Case*,—Which is now on hand, is a married lady, aged thirty-five, of nervo-sanguine temperament. Has had Dysmenorrhœa ever since she was eighteen years old, accompanied with Epileptic Spasms, so severe as to dislocate her shoulder at each return of the Menses. I commenced with the same treatment, six days before the expected period. She sickened at the ten-drop dose, and vomited freely ; pulse, when she commenced with the medicine, was eighty-four, and when she became nauseated, had fallen to forty-seven. Directed her to fall back on the four-drop dose, once in four hours, and continued it up to the expected menstrual period ; but as before, it did not come on until the fourth night *after the time appointed* by her. I saw her the next morning after the appearance of the flow. She had no pain ; pulse sixty, full and soft ; skin cool and moist, with not the least symptom of spasm, and has passed through the usual time with a free flow of the Menses, unaccompanied by any of the symptoms of Dysmenorrhœa or Epilepsy. This, I regard as a case of active congestion of the Uterus, sympathetically producing Epilepsy.

Jackson, April 20th, 1856.

ARTICLE VI.—*Sesquichloride of Iron in Erysipelas*, J. HAWKES, *M. C. R. S., &c.*

Extols this form of iron, especially in Erysipelations, inflammation of the face and head, when the disease was fully established, ordered, to an adult, drachm doses every six hours. Both in the Traumatic and Idiopathic form of the disease, found it successfal, where many other remedies had failed.

ARTICLE VII.—*Application of the Microscope in the detection of Crime.*

We copy the following from the daily papers :—

"A number of barrels, that should all have contained coin, was lately transported over a Railroad in Prussia. On arriving at their destination, one of them was found to have been emptied of its contents, and refilled with Sand. On Professor Ehrenberg being consulted, he sent for samples of sand from all the stations along the different lines of railway that the specie had passed, and by means of his microscope identified the station from which the interpolated sand must have been taken. The station once fixed upon, it was not difficult to hit upon the culprit in the small number of employees on duty there."

As this paragraph appears in the newspapers, it seems to have lost much of its real import for want of a sufficient explanation. At first perusal, some of our readers, perhaps, may not appreciate its full significance, as it involves Analysis of a *special* rather than a *general* character. By the latter expression, we allude to the *form*, *shape* and size of the particles of sand, which, so far as appears in the article quoted, is all that the microscope may be capable of intrepreting.

By special analysis, we mean the following :—Sand, wherever found, whether at the depths of the ocean or on the earth's surface, is full of organic structures.

The most important and reliable fact, is, that each stratum of sand contains fossils, which differ essentially from those found in sand obtained from any other situation.

Consequently, the forms differed in the several parcels which the Professor had procured for examination ; and having analysed the sand, contained within the barrel, it became easy to identify the same stratum, in one of the parcels submitted to him. Thus he fixed the exact locality from which the sand had been obtained.

In illustration, we select from our cabinet four preparations of sand obtained from as many different places, viz. :—the Island of Barbadoes, the Paris Basin, Lüneburgh, in Germany, and the Upper Bann, Ireland.

As this history belongs to the old continent, we have thus

limited our selection of specimens, and omitted those found on this side of the Atlantic.

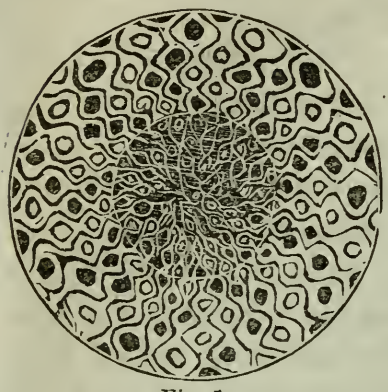


Fig. 1.

The Fossils from the Island of Barbadoes, (Fig. 1,) are remarkable for their great size and extraordinary forms ; unlike, in these respects, the Fossils from any other part of the world. Moreover, in structure, they are peculiar ; all of them presenting either a series of large rounded tubercles, or a number of equally large circular holes. Both these characteristics are displayed to some extent in one of the discoid Fossils common to this formation.

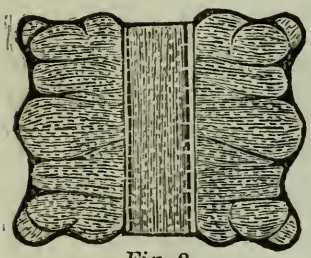


Fig. 2.

Fig. 2 represents a large and surprisingly beautiful Fossil from the Paris Basin. (Biddulphia). The whole external surface of it is covered with minute tubercles, in addition to which it appears to be divisable into three distinct compartments.

The largest Fossils found in the sand of Lüneburgh, are represented in Figure 3 ; they are "Naviculæ," such as are common to many formations; but in this instance are extremely delicate and minute. Associated with these, are numerous joints of "Gallionellæ," of the most minute description. The figures hitherto described, were all magnified two hundred and fifty diameters ; the specimens of "Gallionellæ," shown at Fig. 4, were magnified five hundred and sixty diameters, the intention being to show the great disparity in size. "Tripoli" stands at the head of the polishing powders, and owes this property to extremely minute particles of "Silica," the debris of organic remains. The probability is, that the sand of Lüneburgh would form as good a polishing powder as that which is

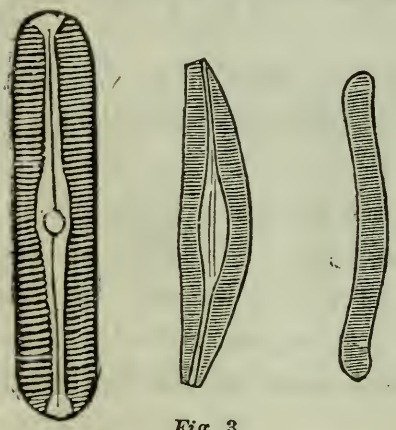


Fig. 3.

obtained on the banks of the "Upper Bann," County Down, Ireland, the locality from whence the specimen Fig. 4 was procured.

Fig. 4.

The above facts and inferences are of peculiar interest to the Geologist, as they prove most conclusively, that the strata of the earth has been deposited at different epochs, or periods of time. The reason for this is obvious. Production of Plants and Animals, in the past ages of the world, appears to have been progressive, and each epoch has been marked by peculiar species of both kingdoms. They have lived and died, and in their decomposition have left behind them the harder portions of their structure, which are more or less indestructible—Sillica forms an important element. The remains occupied the stratum which then formed the surface of the earth, and thereby marks the time when it was deposited.

In the succeeding deposits which occur in the progress of time, each stratum in like manner contains the debris of the peculiar and new species, which then existed. Thus, each layer, or stratum of the earth, is found to possess the evidence of its individual history. H. G.

ARTICLE VIII.—*Influences of Temperature on the Living Economy, and Report of Case illustrating the depressing effects of cold.*

The influences of temperature on the living economy, have given rise to much profound research, and an immense store of facts and philosophical deductions, therefore, are scattered over the pages of medical literature. Heat, in its multitudinous effects, not only as connected with climate, but those of artificial heat, has commanded the attention of the traveller and the naturalist, no less than of the experimental philosopher. Hence, as regards climate, it is found that the varying degrees of temperature in different portions of the globe, impress remarkable physical characters, as well upon the people inhabiting them, as upon the animals and vegetables peculiar to those portions or regions.

So, of artificial heat, it is ascertained that, although the natural temperature of the body, near the centre of circulation, is ninety-eight to one hundred degrees, yet man is capable of enduring vastly more exalted degrees of heat for a brief period, without much physical suffering, or the engendering of disease. Persons have been known to enter, and remain, from ten to fifteen minutes, in an oven heated to two hundred and eighty-eight degrees of Fahrenheit's thermometer, "seventy-six degrees above the point at which water boils," and one, in a similar situation, "breathed air heated to nearly three hundred and twenty-five degrees" of the same scale, "or one hundred and thirteen degrees above that of boiling water." Nor have less surprising influences and facts been observed with respect to cold. In its climatic manifestations, too, it has commanded the observation and study both of the traveller and the naturalist, while in its modified and modifying actions upon animal life, it has offered an inviting and fruitful field to the most learned *cultivators of medical science.* It has been observed, not only to impress upon the inhabitants of particular regions, striking physical characteristics, but likewise upon the animal and the vegetable kingdoms. While there is a certain temperature, which, it is believed, in a strictly normal condition of the economy, is not only agreeable to the feelings in all latitudes and climates, but is most congenial to health and physical vigor, viz. :—sixty to sixty-five degrees ; it is no less true that man may be subjected to a temperature, and often is, quite as low, proportionally, as he has been or may be above the natural standard of heat, without either extreme suffering or injury to health. Hence, observes Capt. Parry, "with the thermometer at fifty-five below zero (eighty-seven below the freezing point,) and no wind stirring, the hands may remain uncovered for ten minutes or a quarter of an hour without inconvenience." And again he remarks, "when the thermometer was forty-nine degrees below zero, that is nine or ten below the point at which mercury freezes, the weather being quite calm, we walked on shore for an hour without inconvenience ; the *sensibility* of cold depending much more upon the degree of wind at the time, than on the absolute temperature as indicated by the thermom-

eter. If we do not greatly err in recollection, the intrepid Dr. Kane and his heroic associates, were subjected to a temperature for months, during their late visit, not "to the farthest verge of the green earth" merely, but to the remotest hyperborean regions ever explored by man, quite a number of degrees lower than the lowest mentioned by the distinguished navigator, from whom we have just quoted. We have deemed it not inappropriate to say thus much in reference to the influences of temperature, and the capacity of the economy to endure, with impunity, extremes, both of heat and cold, as preliminary to a statement of the following case.

W. C. shoemaker, aged twenty, nervo-sanguinous temperament, of rather diminutive stature, but of vigorous constitution, though somewhat debilitated, by indulgence in the ruinous habit of masturbation, went on the Sabbath, one of the coldest, yet calmest days characteristic of the climate, in company with two shop-mates, older and much stronger than himself, to skate on Lake Champlain. The ice being near, and no snow having fallen on it, was uncommonly smooth.

His attire was his Sunday suit, rather a light dress coat, and satin vest, without an over-coat—much less warm than that he was accustomed to, when engaged in his every day employment in the shop. He left home about nine, A. M. The amusement was pursued with earnestness till not far from three, P. M., without food since breakfast, and not having approached a fire. At the hour last indicated, they had, in the prosecution of their amusement, gone some four miles from the village in which they resided, and were about one mile from the shore, the intervening space having been run over and around without intermission, during the entire interval of six hours. Now, they concluded to go ashore at the point opposite to which they were, warm and rest at the dwelling of a good farmer, with whom they were familiarly acquainted, and then walk home on land. This plan resolved upon, they started. Soon the two elder and stronger found that their companion lingered, and turning to look after him, they were surprised to notice he had made no progress towards the shore, and that, instead of moving in that direction, he was, in an obviously feeble and faltering man-

ner, skating round in a circular direction, and soon fell. Alarmed, they made their way to him with their utmost speed, and found him unable to make the least exertion ; also, to utter distinctly or intelligently. They took him in their arms, and being vigorous men, and fine skaters, in a few moments they had reached the shore and were in the house of their friend. On consultation, it was determined, without delay, to harness the farmer's horses, cover him, thoroughly, in the sleigh with blankets, quilts and robes, and drive as rapidly as possible to the house at which he resided. This was speedily accomplished. His employer, to whom he had been apprenticed—a most excellent and humane man—the moment he was made acquainted with the case, dispatched a messenger for us. Residing but a few rods distant from his house, and happening to be at home, we were at his side immediately.

The following is a concise statement of the condition in which we found him :—

The temperature of the surface, generally, so low as to impart a painful sense of coldness to our hand when brought in contact with it ; remarkable paleness associated with a singularly dingy aspect ; eyes closed, pupil contracted to a point ; complete obliteration of all the senses ; mouth quite open from the total extinction of muscular contraction ; tongue quite dry, exceedingly pale, and, like the surface, cold ; perfect flexibility of all the limbs and neck, muscular contraction, as just stated, being perfectly extinct, a singular flaccidity, and, at the same time, a doughy feel of all the muscular portions of the body ; *no part frozen ;* pulse not perceptible at the wrists, nor in the axillæ, neither in the groin ; contractions of the carotids scarcely to be felt, and at remote intervals, temporal arteries not acting, respiratory movements by the closest inspection, not perceivable ; action of the heart as per mediate auscultation, feeble in the extreme, scarcely cognizable and exceedingly slow ; not beyond twenty, or possibly twenty-two contractions in the minute. We come now to speak of the treatment appropriate to examples of such remarkable sedative effects from cold, the course we pursued, and its results. It is but candid to confess that, at first, we were not a little embarrassed to determine the actual

indication by which we *should* be guided, and of course, the plan of treatment that offered the most satisfactory prospect of success. We were familiar with the universally accepted doctrine in regard to the treatment of frozen parts. We had had frequent occasion to apply it, in practice, and to witness its salutary effects, and we subscribed, heartily, to the theory adopted as its rationale. But was it applicable here ? Was it philosophical in the case before us to apply to the whole, or any part of the body, the cause that had already well nigh extinguished life, while yet no portion or part was frozen ? Was not the patient literally dead ? And what cause, save cold, aided by fatigue and want of food, induced this condition, so nearly approximating death ? Would not the further application of cold inevitably prove fatal ? We had not then, met the following, from Dr. Allison, who, with characteristic intelligence, remarks that "this procedure, (the approved practice in frost bite,) is not needed when the sedative effects of cold have been more general ; here warmth and stimulants may be used freely, for there is no fear of partial injurious reaction." And we deem it not improper here to observe, that in our judgment this brief sentence, involves a doctrine and inculcates a mode of practice of incalculable value, and which, present to our mind, on this trying occasion, would have saved us much embarrassment and solicitude; and we can but hope that the publication of our case, the treatmeut founded upon the doctrine involved in the foregoing quotation, though deduced from general principles, and its happy termination, will tend to distribute both the doctrine and the practice inculcated, and bring them home with earnestness to the feelings and judgment of every practitioner, into whose hands they may happen to fall. We were not tardy in determining the course we should pursue.

Stimulants for the time, internally, were out of the question. We were then driven to dependance on the influences of external heat, vigilantly yet judiciously applied, and excitants. The patient was placed in a warm bed, his feet in a foot bath, as hot as we judged could be borne without scalding, plentifully supplied with flour of mustard, rubbing the feet and legs vigorously with dry mustard ; as soon as it was deemed best to remove

them from thé bath, sponging the thighs with hot water and applying mustard, as above, mustard epithem, four inches broad, and extending from the nucha to the sacrum, with a view to arouse energy, throughout the extent of the great nervous centre of the spinal axis, and a like epithem, over the abdomen, extending from the ensiform cartilage to the pubis ; and bath applied warm, at a temperature equal, at least to the normal heat of the body. It is worthy of remark that the nervous system did not respond, in any degree, in the first instance, to the stimulus or irritation imparted by these measures. Baths of water, heated to boiling, were placed in the bed at various points, and at a sufficient distance from the body to avoid burning, the patient was covered with heated blankets, absolute quiet was enjoined, and fresh air freely admitted. Having a hasty call, simultaneously with that to visit our unfortunate young man ; after giving instructions which we were assured would be faithfully observed, we took our leave for the present. Six o'clock brought us again to the bed-side of our patient, when, to our great satisfaction, we found vitality somewhat aroused, as evinced by the obvious suffering, and resulting uneasiness, from the irritation of the mustard, but not yet sufficiently to swallow; nor was the pulse restored, but the warmth of the surface was so far as nearly to approximate the normal standard. At seven o'clock he was so far revived as to be able to partake quite freely of tea and broth, as above directed, though he was still unable to utter distinctly, and the sensibilities had but partially recovered. From this moment he could speak with tolerable distinctness, and he took nourishment with an obvious relish. Now, too, the pulse began to be felt at the wrists, though with striking slowness and feebleness, and the heart's contractions, which, from the moment of our return, had been gradually becoming stronger, and more frequent, had arisen to something over forty in the minute. At this time there was more than ordinary heat about the head, which, however, was readily dissipated by appropriate spongings. At about twelve o'clock he was sufficiently aroused to be conscious of his natural wants, and desired to urinate, which he did in considerable quantity.

From this time till morning he slept soundly and quietly,

the respiration being free, full, and manifestly easy. The next morning he was restored to complete consciousnes, feeling refreshed and comfortable, with normal respiration; without pain or uneasiness of any kind, the pulse sixty, but remarkably soft and weak. Rest in bed was enjoined, during the day customary food allowed in moderate quantity; the excretory functions were naturally performed; he slept satisfactorily the succeeding night; and on Tuesday morning, there being no indications of congestion, or local determination; in a word, being well, he was permitted to resume his labors at the shop, and continued to pursue them, without the return of a single untoward symptom. Thus terminated a case which it seems to us is of uncommon interest. It involves physiological considerations that are complex and important. It gave us as much solicitude, and occasioned as much embarrassment, for a time, as any that has fallen under our notice. We hope others will publish their experience in similar cases. K.

ARTICLE IX.—*A Practical Treatise on the Art of Making and Preserving Microscopical and other Preparations.* By HENRY GOADBY, M. D., F. L. S., &c.

In *open* vessels, the water evaporates, and the salt crystalizes to the total destruction of the specimens included. Salt being highly deliquescent, the volume exposed to atmospheric influence (the upper portion) becomes more or less diluted when the atmosphere contains moisture, and ascends into the neck of the bottle, even around a well ground stopper, by capillary attraction; it gains the upper surface of the stopper and then descends the sides of the bottle, and will lie as a pool on the shelf, on which the bottle stands.

As the weather changes, and becomes dry, the salt crystalizes, and thus forms a conduit for the fluid the next rainy day, by which it can greatly, and readily, extend its out-posts; and by this means, in time, it will pass completely out of the bottle or other vessel. Bladder will not confine it, applied to a glass jar on the plan employed for spirit preparations; and the only plan is to cover the jar with a plate of *flat* glass (patent British

plate manufactured by Messrs. Chance, of Birmingham, is the best; they have now an agency in New York,) and seal it down with the patent marine glue, applied to the glass, with a hot iron.

The best, neatest, and readiest mode, in my experience, is the plan of my invention, namely: First place in the upper vessel of a small copper glue pot some marine glue, cut small; in the lower vessel, where the carpenter would put water, for the careful dissolution of animal glue, put linseed oil, and then apply heat; the temperature of the boiling oil will dissolve the glue, the first, second, and even the third time, with care; after this it becomes altered in its properties, and refractory.

The dissolved glue should be rapidly applied to the rim of the glass jar, (which must be quite dry and free from grease,) with a brush, and the only brush that will stand, I make in this way: Take a piece of rattan cane, as long as a drawing pencil, and cut off the bark carefully from one end of it to the length I desire the brush to be, being particular not to let the knife go into the the substance of the cane any more than can be helped; macerate the prepared end of the cane for a short time in water, and then, while yet wet, pound it with a hammer upon some hard substance, (iron or stone,) constantly turning it with the hand, until all the fibres of the cane be liberated, and the brush is complete. I still use a brush of this kind which I have employed for several years extensively, and none other will stand twice using; the hairs come out with the glue, and are in the way of a good joint. A disc of glass should be cut to fit the jar, made clean, and the part that is to come in contact with the jar, also thinly coated with the hot glue. The disc should previously have had a small hole drilled through the centre, (about one-eighth of an inch in diameter,) for a reason that will presently appear.

The two surfaces of glass being *apparently* coated with marine glue, but *really without contact*, the latter must be insured by means of a hot iron which should be carefully passed over the surface of the glue several times, till it and the glass become hot, care being taken to keep the iron constantly in motion, and always on the edge of the jar, or of the disc, as in that case the

expansion will be equal, and no danger occur even if the iron be *red hot;* but it will instantly break if the iron be allowed to linger in one place, or touch any but the outer portion of the disc, or rim of the jar.

The jar should be thus prepared while *empty, and dry,* and when complete, the liquid may be poured in, to about one half the height of the jar, together with the preparation to be suspended in it. The strings necessary for this purpose may be brought over the edge of the jar and pressed into the glue on the surface, if soft enough to admit of it. The preparation may now be regulated to the required height in the jar, and the threads of suspension kept in their place by a wet string passed round them on the outside of the jar, several times, and tied. If any fluid chance to be on the surface of the marine glue on the jar, it should be removed; and when dry, the prepared surface of the disc should be placed on the jar and the two brought together in intimate contact by the hot iron, which, as in the former case, must be constantly passed round on the edge, and the disc simultaneously pressed down, until the process be completed. The extraneous glue on the outer edge may be made smooth and neat by the hot iron.

By means of a syringe, to which a small pipe is affixed, fill up the jar with the preserving fluid, through the small hole made in the corner of the top glass, not quite full, however, as the great expansion of the fluid, (the B, especially,) in sudden increase of temperature, may cause the breakage of the top glass; then cut a cork to fit the hole tightly, insert it, pare it off level with the surface, place upon it a piece of solid marine glue made to adhere to the cork by means of the point of the hot iron, and cover it with another disc of glass about the size of a ten cent piece, or an English six-pence, and the preparation is finished.

It is a good practice to prepare the portion of thread that is to come outside of the jar, the cork, and the surfaces of glass to be coated, with a solution of the marine glue, which may be made by dissolving a piece of glue in an excess of white-wood Naphtha.

Should a stopper become fixed in the neck of the bottle by

the crystalization of the salt, it may be easily removed by dissolving the salt by water, and gently tapping the cross-piece of the stopper at the extreme ends, (*never across its shorter diameter,*) with a door key. If the cross-piece come off, make it and the remainder of the stopper that is in the neck of the bottle, hot with the iron, apply marine glue, and cement them together,—when cold, renew your operations,—the stopper is stronger now than before, and will easily come out, and last longer than one not broken. To keep the fluids in stoppered bottles, and to prevent the possibility of the salt crystalizing on the outside of the stopper, the marine glue may be advantageously employed; or a cement, proposed by Prof. Olmstead, of Yale College, and made by melting resin and lard together, by the application of heat, and intimately mixing them. The respective quantities of the materials will depend on whether the cement is required to become hard or not. If the former, the resin must be in excess; if the latter, use more lard. For the purpose that I indicate above, it should be *stiff* and *ropy;* remaining just soft enough in hot weather to spread with a pallette knife.

As a final remark, I would say, that the preservation of animals, either in alcoholic, or in my fluids, is greatly facilitated by employing, in the first stages of the process, a large volume of fluid.

Crowding animals together in a limited space, and with only a small quantity of fluid, is a fruitful source of injury and loss of the majority, if not of all the specimens; when, however, the preservation is completely effected, the specimens may be packed very closely together, in a small vessel, and as much fluid, of the required strength, as will occupy the interstices, is amply sufficient for transportation or stores, and will last for years; especially if the fluid be kept in by running some marine glue round the stopper and neck of the bottle with a hot iron, or by using the resinous cement.

INSTRUCTIONS FOR MAKING WET PREPARATIONS OF ANIMAL SUBSTANCES.

It frequently happens to the Naturalist, and the Microscopic observer, to meet with animals, or tissues, which, from a variety

of circumstances, cannot be retained in any other form than that of a *permanent preparation.* They may be small, and so delicate that they would be entirely lost if put into a bottle; and, in such a case, it is desirable to mount them, without delay, as preparations for the microscope.

If the object be merely a filmy tissue, take a piece of glass, of good quality, good surface, and flat; the substance is not material.* Clean it with liquor potassæ or dilute sulphuric acid, or use both these fluids, mixing them on the glass; they effervesce, decompose each other, and at that moment, clean the glass; rinse it in clean soft water, and dry it with either a clean muslin handkerchief, or a piece of chamois leather; now test it with a drop of water placed on the centre of one side of the glass, and if the water can diffuse itself *evenly over the whole surface, the glass is clean;* if not, it must be made so.†

This, which is frequently the most difficult part of the whole process, being accomplished, place the glass in the vessel in which the tissue to be mounted lies in preserving fluid, and float it on to the glass; withdraw the latter carefully from the vessel. With a fine (needle) point adjust the tissue to the centre of the glass, and soak up the excess of fluid with a camel's hair pencil, leaving enough to cover the preparation. Now take a piece of *thin* glass, such as is used by microscopists, previously cut, of less width than the glass on which the tissue lies, and, having cleaned it by the mode described, hold it at one end by a pair of finely pointed forceps, and apply the other extremity, holding it almost vertically, to such portion of the other glass as to leave the preparation in the centre of both.

Gradually lower the top glass, and the fluid will run before it until the preparation be covered, and the top glass finally rests upon the lower one.

To be Continued.

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* The best glass for this purpose is the "patent British plate," manufactured by Messrs Chance, of Birmingham, and New York.

† It sometimes happens that neither acid nor potash can clean a piece of glass sufficiently well to enable it to endure the test proposed. In such a case watery solution of gum arabic may be used; or what is still better—the human saliva will clean it instantly—lick the glass.

SPIRIT OF THE MEDICAL PRESS.

Low Fees and no Fees for Medical Services.

Mr. Editor:—I have for sometime been thinking over the subject matter of the present communication, and propose now to offer you some plain words upon an important subject. It has grown into a principle in the profession, that it is derogatory for physicians to talk of their compensation, for fear they shall be considered venal and mercenary—and so exquisite has the feeling become, that these men suffer themselves to be cheated of their honest dues—to be bamboozeled and circumvented in all manner of ways, for opinions and advice, so that no pay can be asked. They are assailed in the streets for advice, they are beset on all occasions in their daily rounds of business for directions and receipes, when no compensation is offered, and according to common etiquette, none can be asked. The amount of such gratuitous prescribing becomes large in the experience of every physician, and in a life time, it would be a comfortable competence to a man's declining years. It, however, gets even poor thanks, for it seems to follow in the public mind, as a matter of course. You must be the servants of servants—you must listen to long yarns, and get rid of your troublesome patrons by a gratuitous prescription—your time and talents be frittered away upon gossiping long winded and self complacent patients, who are shrewd enough to use you, without any cost to themselves. And then, when we *can* charge, the rates are so ruinously low, in these times of famine prices especially, that it is with difficulty that physicians can live. No one can have failed to see that the medical profession in New Hampshire is at the present time greatly depressed, that this class of persons are struggling hard for their bread. Indeed, the prices of charging are not higher than they were forty years ago, while the community require of us far better

qualifications and skill, and do not excuse the slightest leniency, but pounce upon us with all fury, if perchance a deformity happens to any of our surgical cases. I speak more particularly of the country towns where there have been no changes in the rate of charging, while I am aware that in the cities and some of the important villages of the State, the rate has been partially increased. The profession is not indeed as lucrative as it was twenty years since. Various causes have transpired to produce this state of things. The multiplicity of nostrums has been unfavorable to the physician. Some of these vile compounds have been substitutes, where the physician used to be called—the patient lives through it, as he is pretty likely to do —and after a while he gets well—or what he calls well—with often some chronic inflammation remaining, or with the relics of disease that nature could not quite carry off—or other affections, half subdued, that troubled him for years. This is the great crying evil of our times, and our communities are using these base nostrums to their great injury. Better, far better, were an entire skepticism in regard to medicine, than this common and indiscriminate drugging.

The income of the physician is also somewhat diminished by the great multiplicity of drug shops that has taken place of late. In our country places they are pretty poor concerns. The druggist is generally green—without having any preparatory training for his business, and you would as soon trust a prescription in the hands of a child as in his. His medicines, of course, are poor enough—you find his shop but little convenience—you dare not use the chemicals he sells, and as for other articles, you buy only what your eyes and taste indicate to be pure. And then his shop is full of every abomination of patent medicine that can be called for, all arrayed in the most approved form, to catch the eye—and the sale of this stuff, constitutes a good part of his business. And further, this druggist, green and ignorant as he is, like all the rest of the world, is ready on all occasions to prescribe, and thus he gets off his medicine and preparations, to the injury of the physician. Some of the irregular practitioners, as the Homœopath, Hydropath, and other quacks, break in upon your practice, and often take off good families. You have nothing to do but to submit to these egregious follies, and wait till some emergency shows the worthlessness of all their things, when you will be importuned to step in and try to avert the consequence of delay, of error, and actual delinquency.

I ought not to omit to mention the injury to the profession, occasioned by the withdrawal of so many persons in every town and part of the State from the care of the profession and put-

ting themselves under the treatment of such quacks as Fitch, Hunter, and a host of others. These men prescribe without ever seeing their patients. They usually publish a book upon the branch or speciality they pretend to practice, which is written with great art and often with much ability, for money can command almost any kind of talent—these are sent to all invalids, and they are sure to find, among the cases of recovery detailed here, some one exactly like their own. These invalids, to whom little or no hope can be offered by the scientific physician who has a conscience, are here assured that they can get well, if they will only send them an account of their symptoms, together with the money for their medicines. The express of our country carries the worthless nostrums of Fitch to every nook and corner in New England—the pay always being in advance! and so with the inhaling tribe, they will put a patient through a course of a month for $25 in advance! The number is said to be large, that doctor, as it is called, through pulmonary tuberculosis, and other diseases with these quacks, entirely by a correspondence, or themselves and friends. These empirics keep some one in their establishment, to do their correspondence, and these poor deluded patients who imagine they are holding a very frequent and particular correspondence with Fitch, Hunter, &c., are receiving nice and feeling responses in relation to their complaints and the management by a mere understrapper hired for this purpose. This has already grown to be a great evil, and immense sums are sent every year from our State to swell the coffers of these heartless quacks, while better men are languishing at home, and not employed, because they cannot, like them delude, and deceive their patients.

All the follies and absurdities enacted by mesmerism, by any of the tricks of clairvoyance or spiritualism need hardly to be mentioned. They are perhaps more humiliating to the physician than injurious. They keep the public mind in an unsettled state, and put many a sufferer out of the pale of relief, by this absurd dependence on what will fail them in the hour of need. It is only bad that so many fair and well meaning people are pursuing a phantom, and are involved in such mists and fogs as rarely ever find their way out.

The profession to act as though their services were not to be reckoned in dollars and cents; and the people gladly take it so, giving little heed or credit to the high principles and disinterested conduct that prompts such a course. It is considered fair game, on all hands to get as much out of physicians as possible without pay. One asks what he shall do for a cough, another would be relieved of a severe rheumatic or neuralgic pain, another desires some suitable prescription for a diarrhœa,

&c., and in all times and places to preclude the idea of paying for it. So that the physician makes his highway prescription—his street prescription—and thousands of others where no pay can come. The lawyer asks a fee for his advice—you by common consent can ask none.

Then as to the prices he asks, when he can charge, they are ruinously low. In some places I have known all the business of a village done at two shillings a visit and medicine found, and some of these patients visited from one and a half to three-fourths of a mile; and perhaps a fourth or fifth of them never paid, and what is paid is delayed a year or two, or till the patient can urge upon you some article of produce at the highest price and of the meanest quality. If you should ride two miles you can charge from fifty eight to sixty-seven cents, finding medicine; three miles seventy-five cents—and four or five miles, from five shillings to a dollar. As bad as this is, I know a physician who rides four miles for half a dollar—and who made a visit in consultation at the distance of nine miles and only charged a dollar! He was formerly in the habit of charging thirty cents a visit in his own village! now village visits at fifty cents are lower than other services rendered to the community. A farrier would be considered very cheap for any prices like this, and yet to the educated and well trained physician, this small sum is grudgingly allotted.

Office prescriptions are proportionably low. I have often known them made for twenty-five cents, with a careful examination and medicine. Indeed, so has it grown to be an established fact, that the physician must not charge unless he gives medicine—his opinions must be gratis, like the quacks, who advertise to give advice gratis—and Lord, what advice! but make the people pay dearly for worthless nostrums.

In regard to the pay, when there is any pay at all, it is better than it was formerly, for the physician is now sometimes paid like other people. It is a settled practice, however, in the community, when individuals are making their appropriations to pay their debts, the physician's bill is the last to be provided for, and without any "compunctious ventings of nature," it is laid over till another year, or till it is perfectly convenient to pay it. Then it may go year after year without interest—and the poor means of the physician is thus frittered away—and he just able to make the two ends of the year meet. It is not a debt that lies heavy on a man's conscience—it is nothing but doctoring. They know that the Doctor will be quiet—that he will not even dun them, when thus delinquent, for they hold over him the fear that they will desert him, or go over to his competitor, than which he had rather give them his bill and

another year's doctoring to boot. It is this miserable subserviency that induces such treatment. They seem to forget that they might about as well lose such patrons, who are so loth to pay and so very annoying and overbearing; they cost more than they are worth. The workman is worthy of his hire. The physician is wanting in duty to himself, to let men thus trample on his rights.

I have thus spoken of some of the circumstances that, at the present time, tend to depress the medical profession in New Hampshire. I know that it will be said, that it has lost the confidence of the community—it should rather be said that physicians have become too matter of fact men for the people—they have too much discarded the marvellous, the almost supernatural, and speak in plain English, both in the names of disease, and the medical matters discussed, as they would of any other subject. I can only say that we prefer to be *men*, though we are certain to remain poor, to that of being rich as Crœsus, having thereby made shipwreck of our honor, integrity, and conscience.—*N. H. Jour. of Med.* HIPPOCRATES.

On the use of Sulphate of Bebeerine in Menorrhagia. By Prof. A. P. MERRILL, M. D.

A few weeks ago I was summoned, in haste, to a lady suffering from an attack of menorrhagia. She had been long subject to excessive menstrual discharges, and uterine hæmorrhages, and had been treated for them by several physicians, without success. I administered five grains of the sulphate of Bebeerine, which I happened to have in my pocket, and ordered twenty pills, of four grains each, one of which she was directed to take every two hours, until relief should be obtained. On visiting her the second day, she showed me the twenty pills, and said the dose I had given her suspended the discharge before they were brought from the druggist, and she deemed it unnecessary to take them. One other case, occurring about the same time, in all respects very similar to the above, was relieved, also, by a single dose of five grains.

I could relate more than a dozen cases, besides the foregoing, more or less severe, in which the sulphate of bebeerine has been successful. Several women in this city are now in the habit of keeping the remedy always at hand, with perfect confidence, from the results of their own experience, of being able to restrain excessive menstruation, and uterine hæmorrhage, whenever they may occur. In several cases, also, I have known it

relieve leucorrheal discharges, and to give tone and vigor to the vagina, suffering relaxation from the effect of such discharges; and it is the only internal remedy upon which I have been able to rely, for the relief of *pruritus vulvæ et vaginæ*. Whether this remedy will prove to be as valuable as the above experiments would seem to indicate, remains to be proved; and it is with a view to elicit such proof, that this publication is made.—*Memphis Medical Recorder.*

Return of the Secretion of Milk after Weaning.—M. Gubler, Chef de Cliniqué, of the Faculty of Paris, has published four cases in the *Gazette des Hospitaux*, which show that milk may return to the breasts after a longer period, when a child has been weaned, than is generally supposed. Three occurred in the Necker Hospital, under the care of M. Trousseau. The milk returned in the first case, after a suspension of nursing for two months; in the second, after one month; and in the third, after four months had elapsed. In a fourth case, in the city, the secretion returned after a discontinuance of nursing for two months. In the first three cases, the children returned to the breasts without any trouble; in the fourth case, the child showed aversion to it for two days—but all other food was refused, and it yielded. In one of the cases, the menses had returned a few days before. These facts should afford encouragement in cases when the child is suffering from want of its natural food, and a wet nurse cannot be obtained; or, when there is great anxiety on the part of the mother to have the child restored to the breasts.

Morning Sickness.—Dr. Kuechenmeister, (*Journal des Conn. Med.*,) contends that the distressing morning sickness which occurs in the early months of pregnancy, results from emptiness. He proposes that all breeding women should take their breakfast in bed, and not rise for two hours afterwards. As the stage which precedes the vomiting bears some analogy to syncope, the repose in bed, until after the morning meal, is not an irrational suggestion.

Honors to the Profession of Medicine.—The King of Belgium has just created eighteen of the most distinguished physicians in his kingdom, Knights of the Order of Leopold. The Belgian Government has just decided on according an allowance of fifty per cent. on the conveyance, by the State Railways, of alimentary substances destined for hospitals and other charitable institutions.—*Lancet.*

Insanity in India.—Of insane persons the cures to the admitted in Bengal are 52-60; while in eleven different asylums in Great Britain which have been selected from a recent report for comparison, there were only 37-04, one of the explanations of this circumstance appears to rest in the fact that a very considerable proportion of those admitted as insane to the Jail Hospitals, and probably also to the Asyla, are wretches crazed by the excessive use of narcotics, especially of gungah, and then excited to temporary madness by the brutal and violent practices of those about them, with a view to expel the demon with which it is believed they have become possessed. The reporters find that in nearly one-half the cases insanity is attributed to gungah smoking. The natives are very seldom sent in the acute stage of insanity to asylums; the manifestations of the disease are not usually so violent in natives as in Europeans, and the former are more tractible as patients than the latter.—*Report on the Lunatic Asylums in the Bengal Presidency.*

Sale of Poisons.—An inquest was lately held before Mr. Bedford, the coroner for Westminister, on the body of a fine young woman who committed suicide by taking a composition for poisoning rats and mice. It was proved by evidence that the poison in question is readily obtainable without any question whatever being asked. It is of a most deadly character, consisting of arsenic, phosphorus and smalt. The deceased took only a small portion of the compound, and died a few hours after in great agony. At the inquest the surgeon in attendance referred to the anomaly which existed in respect to the sale of poisons: for arsenic and other poisons could not be obtained unless in the presence of a witness, whilst the poison under consideration was readily obtainable. In their verdict the jury condemned the indiscriminate sale of the rat poison, and expresed a hope that legislative measures would be taken to prevent it.

Poisonous Nature of Tobacco packed in Leaden Cases.—The *Union Medical* for September, 1854, contains some remarks on this subject. The moisture contained in the tobacco oxidizes the lead, and forms a soluble salt. The tobacco becomes covered with a layer of acetate, carbonate, chloride, and sulphate of lead, amounting to from six to thirty grains in half a pound. Tinfoil has, therefore, in France, been ordered to be used instead of lead. The presence of lead in tobacco is detected by burning the tobacco, treating the ash with dilute hydrochloric acid, evaporating, and treating the re-dissolved residuum with iodide of potassium, sulphate of soda, and sulphuretted hydrogen.—*B. & F. Med.-Chirurg. Rev.*, Oct. 1855.

Abstract of a Paper read before the Medical Society of London.
By Dr. Edmund Smith.

On the Efficacy of Small Doses of Morphia in certain Chest Diseases. —The dose referred to by the author was from the sixty-fourth to the twenty-fourth of a grain for an infant or young child, and from the twentieth to the twelfth of a grain for an adult, repeated from three to six times in the twenty-four hours. The principle involved was the removal of excessive cough in those cases in which the cough resulted from nervous irritability of the structures of the air-passages, and thereby to prevent various ill effects which would follow from its continuance. He did not regard the cough as a symptom merely, but as the result of irritation, and it was by the removal of the irritation that the cough was to be prevented. He showed that the effects of minute and often repeated does of morphia was far more efficacious than occasional and larger deses, and that the sensorium remained quite unaffected, and the bowels nearly so, under its influence, and therefore that no disturbance to the general system was produced by its administration. The author selected three diseases in illustration of the merits of the remedy—viz., hooping-cough, the ordinary and spasmodic form of chronic bronchitis, and phthisis. Hooping-cough he regarded as essentially a disease of the nervous system, quite apart from inflammation, and considered the principle of treatment to be the removal of spasm, so that the cough might be reduced to the harmless state of common cough. He believed the secretion to be chiefly due to the violence of the cough, and consequently that the aim should not be to increase the secretion by expectorants, but to stop the cough, and allow the secretion to cease. He was also of opinion that the congestion of the lungs in more advanced cases, which often leads to other complications, is chiefly due to the spasmodic cough. Thus he inferred that the prevention of the cough was in fact the prevention of all serious and fatal complications. The treatment he recommended was first to remove all sources of irritation, to give nutritive food in small quantities and very frequently, to expose the patient to cool, pure air, and in general to place it in the best sanitary conditions, and then to administer the morphia. The system adopted, in giving the morphia was to begin with a very small dose, (say the sixty-fourth of a grain to an infant four months old,) and, if need be, to rapidly increase it until the slightest drowsiness was perceptible, and then to regard that effect as the measure of the dose, and to continue the dose and effect until the spasm subsided. He particularly insisted upon the fact that any dose less than sufficient to effect the sensorium in the slightest degree was insufficient for the immediate cure of the disease, and therefore that the art in the administration was to produce and maintain that effect in the quickest way, and with the smallest dose. After giving the sixty-fourth of a grain for three or four doses without any drowsiness, he would then increase it to the forty-eighth of a grain for three or four more doses, and again, if need be, to the thirty-eigth and thirty-second of a grain until the slightest drowsiness

appeared. Thus the proper dose would soon be ascertained, and within one or two days the spasm would be materially lessened. He stated that within four, and commonly within ten days, he had cured severe cases so far as to reduce the spasmodic, to a common cough, and to prevent the recurrence of any complication. The points he especially urged were, the rapid increase of the dose, to produce the desired effect, and the careful maintenance of the effect by regulating the dose. He insisted upon the necessity of using a graduated measure in the administration of the remedy.

Chronic Bronchitis.—The attacks of this disease, as commonly seen in the *habitues* of hospitals, he believed not to be inflammatory but nervous or spasmodic, both in the cough and in the dyspnœa, and also even in the sense of constriction of the chest, and that the aim should not be to increase the secretion but simply and purely to remove the nervous condition on which the cough, secretion, dyspnœa, and tightness depended. The cough he believed to be much more than needful to remove detached phlegm, and by its continuance to excite the secretion, and he inferred that when relief was obtained with the increase of secretion the former was not due to the latter, but both resulted from exhaustion of the nervous irritability by lapse of time. He therefore commonly banished expectorants, and administered small doses of morphia. The dose was usually the sixteenth of a grain, repeated three or four times a day. Very speedily the cough was relieved, and then the dyspnœa, and at the same time or subsequently the sense of tightness. He maintained that the same remedy which first relieved the cough only, would, by continuance or increase, relieved the dyspnœa also. As a preliminary step all sources of irritation were attended to, especially the liver, stomach, and bowels. The croton oil liniment was efficacious only on the principle laid down by the author, and not upon the relief of any supposed inflammatory action.

Phthisis.—The exhibition of small doses of morphia in phthisis was not with a view to cure that disease, but to lessen or prevent the occurrence of certain important complications, which the author believed to be in great part due to the cough: such were hæmoptisis, congestion, or inflammatory action, vomiting after food, increase of night perspiration, disturbance of sleep, and the increase of the general irratibility of the system. He was decidedly of opinion, that in all stages of the disease the cough is commonly greater than is required upon the principle of relieving the system, and therefore, and because it leads to further evils, it ought to be arrested. He especirly referred to two periods. 1st. In the early stage, when there is scarcely any secretion, and when the patient voluntarily adds to the cough, to remove a little phlegm which he believes to be its cause. He considered it essential to disabuse the patient's mind of this error, and by that means, and by the aid of morphia, to arrest the cough. 2nd. He had ascertained that the vomiting of the food after meals was not usually due to disorder of the digestive organs, but to cough accompanying an irritable state of the

general system, and a state of repletion of the stomach, and he had commonly prevented it by reducing the quantity of food at each meal, (giving it more frequently,) and by administering the sixteenth of a grain of morphia immediately before or after a meal, as well as at the usual intervals during the day. A more tranquil sleep and less severe night-sweats resulted from the small dose of morphia repeated once or twice in the night than when one large dose was given.

In some of the above conditions the author considered the cough to have the importance not merely of a symptom but of a substantiative disease, and as such to require especial attention in the treatment; but as it was oftentimes associated with constitutional ailments, he frequently combined the morphia with vegetable bitters, and with the sesquichloride of iron.

He (Dr. Edward Smith) preferred morphia to other narcotics, because its strength is more uniform than that of vegetable extracts, and more permanent than that of hydrocyanic acid; and upon the whole it was easily capable of minute subdivision and increase in its dose, and was less dangerous in its administration.—*London Lancet.*

Extract of a Paper read before the Harveian Society of London.

By Mr. J. L. Levison.

On Dental Irritation as a Predisposing Cause of many anomalous kinds of Nervous Affections.—The author commenced by observing that the organs of the mouth were not sufficiently investigated or regarded under the existence of certain disorders of the nervous system, not traceable to direct lesions of its centres. That it was therefore desirable to remind the Society of the intimate connexion of the teeth with the organs of vegetation and animal life. They had close relations with the mucous membranes; with the vascular system; the brain and external senses; with the spinal cord; and the muscles of the head and neck, through special nervous communications, which it was unnecessary for him minutely to describe. Mr. Levison said it would also be useful to submit data furnished by the various affections incidental to the first dention, before entering on the consideration of the anomalous forms of disease resulting from dental irritation in the adult. During infancy, for instance, when the first teeth were developed, the following morbid conditions occurred:—

1st.—Diarrhœa from mucous irritation.

2nd.—Fevers, from derangement of the digestive organs, with increased circulation.

3rd.—Local inflammation of the mouth, producing thickening of the mucous surfaces, with great vascularity, extending to the Eustachian tubes, and inducing temporary disturbing influence, and mistaken sometimes for a congenital defect of parts of the auditory apparatus.

4th.—Convulsions resulting from excitement of the cerebral and true spinal, or excito-motory system.

5th.—Fits involving loss of consciousness and lesions of the brain, with permanent impairment of the mental faculties.

6th.—Skin affections, often translated to the brain by what is called metasatis; or such forms of disease as are induced, as it were, by an effort of nature to relieve the cerebral congestion.

The *rationale* of these different results was mainly to be found in the fact, that the weakest organs under such dental disorders were mostly, as a general rule, implicated.

After these prefatory remarks, Mr. Levison proceeded with his communication, submitting, by well-observed cases, that during the destruction of the teeth, whether from inflammation or accidents, there often resulted serious derangement of the lungs and of the alimentary canal. He then gave examples of the converse of these phenomena, proving that when the stomach and bowels were deranged, the teeth may become sympathetically or secondarily affected. Mr. Levison then called attention to another class of phenomena, arising from pressure on the dental arches, over stimulation, and inflammatory states of the system, which induced painful or neuralgic disorders in the neighboring organs, paralysis in the upper eyelid, temporary deafness, disease of the antrum, and of the facial nerves, (tic douloreux,) and lastly, convulsive action of the muscles of the neck, palsy on one or both sides, and in some instances, all the voluntary muscles. This portion was illustrated by some very instructive cases. Finally, he commented on the disturbing agency producing, in the predisposed, hysteria, epilepsy, and periodic complaints, as hemicrania. He entered into a physiological and pathological discrimination of these and other forms of disease connected with lesions of the brain and its membranes, and those associated with excrescences at the roots of the teeth, or when there existed exostosis, which he believed might be diagnosticated before extraction, when this became absolutely imperative by the urgency of the complications. He concluded by making the following practical inferences or corollary:—

1st.—That a general knowledge of anatomy, physiology, and pathology wes essential to every one devoted to any special practice.

2nd.—That special practice was essential to the apprehension of particular phenomena, and to distinguish whether the disturbance in any part was of local origin, or the result of reflex nervous action.

Lastly, that in forming a diagnosis of nervous and neuralgic affections, it was necessary to take into consideration all the conditions which might constitute a source of special disturbance; and when the brain and spinal cord appeared in a normal state, it was incumbent on all to search for the cause in some disease of the buccal cavity.—*London Lancet.*

Treatment of Menorrhagia by Oxide of Silver.

To the Editor of the Lancet.

Sir,—Although I have long ceased to be a physician accoucheur, and have occupied myself in the less laborious avocations of medicine in general, I cannot resist the inclination to publish in your journal, from which I have derived from time to time much instruction, a case of cure through the agency of that invaluable preparation the oxide of silver, which I mysel introduced to the profession in 1845,* and have prescribed more frequently than any other English medical practioner in cases of long persisting hæmorrhage, diarrhœa, dyspepsia, &c., and in which my confidence (during a steady trial on a sufficiently large scale, of fourteen years' duration, *publicly and privately)* is stronger than ever it was. I subjoin the gratifying report of my friend, Mr. Walter Jones.

I am, Sir, your obliged and faithful servant,

JAMES EYRE, M. D.

Lower Brook Street, Dec., 1855.

I have great pleasure in forwarding to you the notes of the case I mentioned to you a short time ago. The patient, Mrs. W. W——, aged twenty-eight years, delicate looking, was the mother of one child, aged five years and had a subsequent miscarriage, but did well after it, about the beginning of January, 1854, was taken with severe menorrhagia, for which on the 10th of January, 1854, the orgot, combined with tonic, (quinine, &c.,) was given twice a day, and continued till the 18th of January without much benefit, when the sulphate of iron was combined with the ergot and persevered in for a week (till the 24th of January) without her deriving any benefit, at which time sulphuric and gallic acid, with a bitter, were administered, also a solution of alum and sulphate of zinc, to be used as an injection thrice daily. These remedies were continued till the 5th of February, without the slightest relief, the patient getting very low in consequence of the continued drain going on. Dr. —— was called in for consultation, and prescribed full doses of the tinctura feri sesquichloridi three times a day, and a pill every night of superacetate of lead one grain and a half, and pulv. opii, half a grain. The hæmorrhage still continuing to a serious extent, with frequent faintness, cold was applied to the vulva, &c., &c., bandaging, &c. On the 12th of February she took the tincture ferri and quinine, with some secale, and under its influence she slightly improved, till the 16th, on which day her medicine was changed to spss. æth. nit., tincture cinnamon co., and tincture calumba, and contiuued till the 18th, on which day she became much worse; gallic acid given in twelve grain doses, and pil. saponis c. opio, five grains, o. n.; this was continued, with but slight benefit, till the 24th of February, when I gave her one-drachm doses of the bitartrate of potash three times a day. She derived more benefit from this remedy than anything she had yet taken, and

it was continued till the 18th of March, which was nearly a month,) on which day the hæmorrhage returned to a most alarming extent; the fainting coming on at frequent intervals, and on the slightest movement, and, indeed, at one time, life seemed to be all but extinct. Stimulants of all kinds were administered freely as the only chance of saving her. While in this fearful state, Dr. —— was sent for. He prescribed the following, R. Argent. oxid. one grain and a half, ext. tarax., pulv. tragac. co. of each six grains, div. in pilulus sex, capiat i. ter die. *After the first two doses there was a marked change for the better*, and from that time there was daily improvement till the middle of April (taking her pills daily,) when, very soon after, she was able to go to the sea-side. She has since been confined (on the 19th June, 1855) of a fine living boy, which she is suckling at the present time, and has never had a repetition of the discharge, and is now in good health.

During her confinement I was rather apprehensive of hæmorrhage coming on, but fortunately everything passed off very well. The above case plainly shows the valuable properties of oxide of silver in this class of cases. All the best remdies known were tried with but little benefit, and I feel confident that had it not been for this preparation acting so beneficially, the patient's life would, in a few hours, have been lost. *It deserves a well-spread notoriety, and, doubtless, many cases prove fatal from the want of knowledge respecting the properties of the oxide of silver.*

With feeling of high esteem, I remain,

Yours sincerely,

W. JONES.

Nitrate of Silver as a Remedy for Burns.—I wish to call the attention of the readers of the *Examiner* to the value of the nitrate of silver as an application to burns and scalds. I have used it frequently, both in deep and superficial burns, and I have been equally surprised and gratified by the results. The advantages of the caustic application are numerous. It furnishes a complete protection to the inflamed surface, subdues the pain, arrests the serous discharge, changes the character of the inflammation, promotes a speedy cure, and, if I am not mistaken, prevents the formation of those ugly cicatrices, and the irregular contractions of the skin, which so often occur in the healing of burns.

The mode of application is simple. In superficial burns, a strong solution —twenty to forty grains of the nitrate to the ounce of water—should be applied over the whole surface with a camel's hair pencil; vesications should be opened, and the surface carefully wiped dry before the solution is applied. If the burn is deep, and the discharge of serum is abundant, the entire surface of the ulcer should be touched lightly with the solid stick.—John Wiltbank, M. D., *in Med. Examiner.*

Artificial Respiration.—Dr. Marshall Hall has just addressed to M. Flourens a letter on the above subject, of which the French physiologist read the following extract before the Academy of Medicine of Paris:—"I am at present engaged with researches respecting asphyxia, and think that I can show the advantages of turning the patient on his face when artificial respiration is performed. When the person is lying on his back, tongue falls on the epilogittis, by which circumstance the glottis becomes closed; and the latter is likewise obstructed by the fluids which are stagnating in the mouth, and are forced up from the stomach. All this is changed when the position is altered, and the patient is put on his face: the tongue falls forward and carries the epiglottis after it; the glottis thus becomes patent, allows the air to enter the lungs during inspiration, and the fluids lying about the fauces are discharged. Hence the efforts made at artificial respiration are, in the position just alluded to, much more efficacious than in cases where the patient is placed on his back."

Treatment of Chronic Ulcers.

Years will probably elapse before the Medical community will admit that in Opium we have an agent, far more valuable than that derived from its *comparatively* worthless power as a sedative, in the treatment of this form of Ulcer. It is notorious that the Chronic Ulcer, the disease of long standing is unattended with pain. To suppose that Opium effects its local marvels by any sedative property in the drug, appears to me worthy only of the advocacy of a senile female, or of an uninstructed youth. If we administer five grains of the Soap and Opium Pill, night and morning, to a man advanced in life, who has been carrying about with him for ten years, a large callous Ulcer, with an ash colored base, surrounded by high walls of organized lymph, and in which there remains not a vestige of activity, good or bad, advancing or receding, the moisture from which is a hot ichor, becoming sanious under provocation; if we examine carefully this surface, at the expiration of forty-eight hours we shall find it speckled with red points; these are future granulations, and in ten days the whole of the base of the wound will be carpeted with them. And this is the mere result of suspended imitation.—*London Lancet.*

FREDERICK C. SKEY, Esq., F. R. S.

REPORTS OF LOCAL DISEASES.

Prevailing Diseases of Detroit.

MESSRS. EDITORS,—It will always be a soure of pleasure for me to contribute to your journal, any items of practical interest derived from experience or observation, which may in any way advance the *legitimate* practice of medicine. And I most fully endorse your views upon the importance of statistical evidence, respecting the prevalence of disease in various localities. Aside from the value attached to practical deductions, and generalizations, drawn from these reports, there is a pleasure in having such a professional introduction to the members of the Faculty in the various parts of the State.

We shall always find it both interesting and profitable to compare notes, observing the ever varying phases of disease, and diversity of medication, which are dependent upon and governed by local influences.

My own practice in our city for the past month does not indicate any increase in the aggregate of disease, compared with March. Have met with a few cases of Fever, having a low grade, with a tendency more or less to congestion, especially of the lungs—not as active, however, in this respect, as during the cold weather. (My treatment of fevers I shall endeavor to offer for your next number.)

I have met with an unusual number of Glandular affections—especially of the Parotid and Submaxillary—accompanied with more or less of inflammation of the Fauces, and air passages.

In these cases I have relied principally upon a solution of Nitras Argenti, sixty grains to the ounce, and Quinine. I have derived no advantage from Mercurials in these cases, but on the contrary I think I have observed a deleterious effect when it has been administered.

Have noticed an unusual tendency to convulsions, especially among children. Have met with one case of Puerpural Fever, accompanied with convulsions; and have heard of several others. Think there is more than an ordinary tendency to this disease in our city at this time.

Have also met with a few cases of Erysiplas and Scarlatina—mild form. These, without opening a short chapter of accidents, with an occasional paragraph of Venereal and Obstetrics, makes up my record for the past month.

Yours, &c.,
J. C. GORTON, M.D.

Pontiac and Vicinity, (Oakland County, Michigan.)

This section has been more free from disease for the last two months than for a long time previously. Those forms which have occurred, have been principally Malarious Fevers, Pneumonia, Inflamation of the Bronchi, with an occasional case of Typhoid Fever, and Rheumatism. The latter has appeared in a subocute form, and for the most part as a sequence of Typhoid Fever. The intensity of the Miasmatic influence modifies every disease, more or less. Inflamations are generally of a low grade, not bearing depletions by the lancet, or, in fact, by any other means.

Tart Antimony and opium, with alterative doses of calomel, are the most reliable remedies in the more urgent cases of Pneumonia; while, in its milder forms, some simple expectorant, with Dorer's powder, is better than more thorough medication.

In cases of Malarial Fever, our most prompt and certain remedy is quinine, but where this alone is used, we are very

apt to have a recurrence of the malady. Fowler's solution, though slower in its action, is more permanent in its effect.

We have found a combination of these remedies more reliable than the exclusive use of either.

W. F. LAUDERDALE, M. D.

Diseases of Dearborn, (Wayne Co.,) and Vicinity.

DEAR DOCTOR,—Agreeably to your request, I send you a report of the Diseases which I have been called upon to treat for the month ending March 20th.

	Cases.		Cases.
Pneumonia,	24.	Intermittent Fever,	9.
Dysentery,	1.	Influenza,	4.
Anasarca,	2.	Melæna,	2.
Meningitis,	1.	Morbus Coxarius,	1.
Peritonitis,	2.	Neuralgia,	1.
Acute Rheumatism,	2.	Epilepsy,	1.
Opthalmia,	2.		

As you perceive, Pneumonia was the prevailing complaint. It was what Dr. Wood denominates Bilious and Pluro Pneumonia, demanding *thorough antiphlogistic treatment.*

I have employed Venesection, Mercurials, and Antimonials. Have had the best success with Veratrum Viride. My general practice in these cases has been to bleed, followed by a Mercurial Cathartic, and then exhibit Veratrum Viride.

The other cases have proved amenable to the ordinary treatment.

It is not often, in this vicinity, that the character of disease changes as much, in so short a time. as during the last month. During the Winter, diseases assumed a highly inflammatory type, but with the subsidence of cold weather, this peculiarity has mostly disappeared.

For the month past, I have had of—

	Cases.		Cases.
Pneumonia,	2.	Acute Bronchitis,	1.
Intermittent Fever,	14.	Billious Fever,	2.
Diarrhœa,	4.	Croup, (True,)	1.
Croup, (Bastard,)	1.		

I have pursued the usual course of treatment in these cases, and have been uniformly successful. Yours, &c.,

Dearborn, April 20th, 1856. E. S. SNOW.

Otisco, Ionia Co.

Messrs. Editors,—The past winter, though intensely cold, has been, at least in this locality, comparatively a healthy one. Childre.. have been the principal sufferers, though until the commencement of March, few indeed were afflicted with any very severe form of disease. During the month of March disease was more prevalent and tenacious, though seldom fatal. In the first part of the month Pneumonia or some form of inflammation of the air passages was the general ailment. Since then the most marked character of diseased action has been an intermitten neuralgia, generally taking on the form of Hemicrania. So prevalent has this form of disease been, that I can regard it in no other light than an epidemic influence, modifying, in fact, almost every disease occuring in my practice during the last four weeks. It has frequently been an attendant upon well marked cases of Intermittent or Remittent Fevers, subsiding at once when these fevers have been controlled, or perhaps lingering for a few days as if loth to quit its victim, and then gradually passing off. But more frequently has it occurred as a distinct affection, unattended by any general febrile action; involving one side of the head, face, neck and corresponding arm. *This* form of the disease has seemed more tenacious and intractable than that which attended upon the miasmatic fevers. Morphine, Camphor and Chloroform, internally, and cold, tincture Anica, or Chloroform Liniment externally, seemed to be the means best calculated to relieve the paroxysms, while from fifteen to thirty grains of quinine. administered in from three

to five grain doses at intervals during the intermission would soon cut short the disease. Homeopathy has been sorely troubled with this form of disease, and has made the important discovery that opium and quinine in *alopathic* doses are *Homeopathic* remedies for intermittent neuralgic affections.

A fatal case of anemia, coming on during the latter months of pregnancy, has occurred in practice during the past month. I saw the patient first at the time of her accouchment; found her much reduced, pains weak and irregular; but after a tedious labour of twenty-four hours she gave birth to a feeble child, lingered about four weeks and died. I have the case in detail on record, but do not deem it of sufficient importance to report at length. If some one who is booked in regard to the cause or causes, and the best method of treating Anemia, as it occurs during the course of gestation, would take the trouble to report his views through the columns of the *Independent*, it would much oblige me and I have no doubt the profession generally.

JOHN AVERY, M.D.

Otisco, Ionia County, April 14th, 1856.

NEW PUBLICATIONS.

Clinical Lectures on the Diseases of Women and Children.—By G. S. Bedford, A.M. M.D.,—Professor of Obstetrics, the Diseases of Women and Children, and Clinical Midwifery, in the University of New York. Third Edition. 8 *vo.*, 602 *pp.*

We have received the above work, third edition, from the Author, and when it was a "forth-coming event," that cast its shadow on the pages of the "American Lancet," it required no prophetic vision to predict its destiny and appoint its place in the Literature of "Obstetric Medicine." Not because it pre-

sented a new field of research, little cultivated, nor yet that it had gone back of standard Authors and modern compilations, to exhume from the "Lost Arts," and reflect from "hieroglyphics" new light upon a great subject.

But inspired by the spirit of progress, its Author was collecting, and transferring to books, the results of "*Clinical Practice;*" giving back to the profession a faithful record of the application of well established principles in Obstetrical Science.

Such is the book before us; and in its detail of the various forms of disease occurring among Women and Children, will be found a counterport of almost every case which the Physician is called upon to treat. Not only demonstrating by example a great variety of disease, but also the results of a judicious medication.

Aiming at the acquisition and promulgation of truth, rather than a display of erudition, its colloquial style appeals from the old standard of dignity, and presents a new feature in Medical Literature, doing no violence to the refinement of cultivated taste; but on the contrary, by marked urbanity of manner and address, offering a useful comment on the rude catechism which too often characterises members of the medical profession. The work has received the highest commendation from the medical press, both of our own country and Europe; and the fact that it has reached the *third edition* within a period of nine months from its first publication, is the highest testimony of its success, and a worthy tribute to real merit. The following is the preface to the last edition:—

"I feel much pleasure in being again thus early called upon to express my grateful acknowledgments to the profession for the kind favor which they have extended to my work. The present edition has been carefully revised, and more than forty pages of new matter added.

In the Appendix, at the end of the volume, are recorded the results of treatment in many of the more interesting cases which have been discussed in the Clinic; this, I hope, will prove an acceptable feature. It will also be seen that a carefully-prepared alphabetical table, embracing every topic treated of in the volume, will enable the reader at once to refer to any special

subject. In conclusion, I think it but justice to return thanks to my publishers for the efficient manner in which they have performed their part of the labor, which is altogether worthy of their respectable and old-established house."

This book ought to be in the library of every practitioner. It can be obtained at Raymond & Selleck's Book-store, in this city.

For price and other particulars, see first page in our advertising sheet. Published by S. S. & W. Wood, N. Y. R.

The action of Medicines in the System, or, on the mode in which Therapeutic Agents, introduced into the Stomach, produce their peculiar effects on the Animal Economy.—SECOND EDITION. A PRIZE ESSAY—By FREDERICK WILLIAM HEADLAND, M. B. B. A., F. L. S., M. R. C. S., &c.

As yet we have been able to give this book but a hasty perusal; it requires but a glance, however, to perceive that the author has presented to the profession a book worthy of the subject which he has treated.

Having left the "beaten paths" of former writers, he has given us, not a compilation, but four hundred pages of well expressed *original thought.* In the introductory chapter the author has aimed, in the first place, to set forth briefly the great importance and extent of the subject, showing that it is an essential requisite in the advance and perfection of medical science.

Secondly, has insisted upon the advantage of correctness and clearness of language in the discussion of such topics; and, thirdly, has presented a concise synopsis and systematic arrangement of his subject, as expounded in the third chapter. In the course of his preliminary remarks he has very pertinently contrasted Rational with Empirical systems of practice; which topic he closes with the following:

Thus, for the proper perfection of medicine as a rational science, two things are in the main needed; the first is a right understanding of the causes and symptoms of disease; the second, a correct knowledge of the action of medicines. Should our acquaintance with these two subjects be complete, we should then be able to do all that man could by any possibility effect in the alleviation of human suffering. This sublime problem is already being unravelled at one end. Diagnosis and Nosology are making rapid strides; and perhaps we shall soon know what we have to cure. But at the other end our medical system is in a less satisfactory condition; and though some impatient men have essayed, as it were, to cut the Gordian knot, and have declared boldly on subjects of which they are ignorant, yet it must be confessed, that in the understanding of the action of medicines, and of their agency in the cure of diseases, we do not so much excel our ancestors. While other sciences are moving, and other inquiries progressing fast, this subject, so momentous in its applications, has, in spite of the earnest labors of a few talented investigators, made after all but small progress. Let those who feel this want bestir themselves to remove it, and it will soon be done.

Those doubts and difficulties, which are now slowly clearing away before the efforts of a few, will then be finally dispelled by the united energies of all; and instead of our present indecision and uncertainty on many points, we shall find ourselves eminently qualified to wage the conflict with disease, being skilled in that science whose name bespeaks its peculiar importance—the science of *Therapeutics.*

The second chapter treats of the more important classifications of medicines, and opinions of authors respecting their actions.

In the third chapter the author has enunciated, with erudite clearness and force, his own views in relation to the subject, under ten distinct propositions. In the fourth and last chapter he has given a classification of medicines which act after entering into the blood, according to their supposed modes of operation.

The book is written in an attractive style—chaste and classical—and ought to be well digested by every member of the profession who desires to advance beyond empirical practice, and have a *reason* for the administration of remedies.

It contains four hundred pages, and in typographical appearance is worthy of, and fully sustains, the reputation of the established house of Lindsay & Blackiston, publishers.

It can be found in this city at Raymond & Selleck's bookstore, 137 Jefferson avenue.

Valedictory Address—By Henry Hartshorne, M. D.

We have been favored with a copy of the Valedictory Address to the graduating class of the "Philadelphia College of Medicine," and are fully prepared to endorse the views of the Author, in regard to the necessity for "Extension of the time of Study" in Medical Schools; having long held the opinion that the period of time allotted to Medical Education is much too brief, and should be greatly extended. We regard, with especial favor, the direct allusion to the cultivation of the Natural Sciences which rightfully belongs to the province of the Educated Physician; and believe that he, of all mankind, is best fitted to comprehend the minutiæ of nature and her laws, as demonstrated through the agency of either Telescopic or Microscopic revelations. We concur with the Author in the opinion that, "the study of the Natural Sciences is one which has had a direct bearing upon and close congeniality with Medicine.

The "farewell address" is the last gift of the Alma Mater, from which the Student has received his introduction to the world as an educated man. It is fitting, therefore, that such a *testimony of attainment*, offered upon the threshhold of professional life, should be an entertaining and instructive discourse, and such is the *literary benediction* of Dr. Hartshorne.

The Ashlar—Allyn Weston, Editor and Proprietor.

This is a Monthly Periodical, ably conducted, and devoted to the interests of Free Masonry. Its pages are replete with matter of first importance to every member of the Craft. The talented Editor is zealously engaged in the good cause of laboring to maintain and restore the ancient land-marks of the order, in which object we heartily bid him, God speed.

Whilst it is certain that no Mason should be without this Magazine, the uninitiated will derive both pleasure and profit from its perusal.

It contains forty-five pages of reading matter, typographically, well executed, and altogether worthy of Masonic Literature.

All communications addressed to Allyn Weston, Editor Ashlar, Detroit, Michigan. $2,00 a year in advance.

The Michigan Journal of Education and Teachers' Magazine—Published under the auspices of the Michgan State Teacher's Association. Edited by John M. Gregory, A. M. Corresponding Editors, E. O. Haven, D. D., Ann Arbor; Professor A. S. Welch, Ypsilanti; Professor D. Putnam, Kalamazoo; H. A. Pierce, Marshall; Miss F. Babbit, Coldwater.

The April number of this Journal is on our table, and commanding, as it does, some of the first talent in the West, it can not fail to continue as one of the ablest exponents of practical education.

EDITORIAL ITEMS.

Clinical Instruction.—We desire to call the attention of our readers to the advertisement of Gunning S. Bedford's New Book, third Edition, found on first page of our advertising sheet, and in connection therewith to make a passing comment.

There can be no higher testimony for the necessity of this species of Medical Education, than that afforded by the fact, that this work has gone through *three Editions in nine months.*

The value and importance of Clinical instruction, has long been fully appreciated in the old countries of Europe. In England and France, for example, no man can be a candidate for a Diploma without the production of a certificate of attendance on "Clinical Lectures" for, at least, two sessions, each of six months duration.

It is, for the superior advantages of clinical instruction, aided by large Hospitals, that so many American Students go to France to complete an education, which can not be acquired at home.

We are heartily glad to perceive that the profession in this country have cordially responded to the attempt so successfully made to place within its reach the permanent record of, at least, one branch of *clinical practice.*

This kind of discipline, the practical application of principles, and theories inculcated, is the nearest possible approach to the field of labor to which the zealous student has devoted his energies.

In a well established clinique, whether its patients are drawn from the wards of a Hospital, or gathered from the wards of a city—diseases of every variety are identified and treated, and where facilities are perfected, every branch of practical medicine is therein represented. Hence the importance of establishing medical shools, not in remote country villages, but in populous cities, where this form of instruction is easily accessible.

Beyond the direct advantage to the Student, clinical teaching has a reflex influence upon the schools, and the whole profession, by *experimental observation,* thus becoming an element of progress in Medical Science. R.

The American Medical Association.—This moving Planet of the Medical Orbit, in its annual return, will be visible in Detroit, on the 6th of May ; and will afford to the Medical men of the State, and the West, an opportunity of beholding without a Telescope, the great "Solar system," and centre of our profession.

We cordially extend the right hand of fellowship and welcome, to all who compose this gallaxy of talent, or may visit the "city of the Straits," on that occasion.

Although our city can boast of age, and point in history to its struggles for Independence, and suffered as much in the confiict as any other, yet we have no "*Independence Hall,*" no "*Crystal Palace,*" or "*Dusseldorf Gallery;*" and but few antique celebrities. If in these respects it can be duly appreciated, it must be by the reflected light of history. Like a visit to some "Classic ground," with the memory of that distinguished personage—"the oldest Inhabitant"—for a guide.

But we sincerely hope that the deliberations of that body will tend to the advancement of Medical Science, and the amelioration of human suffering.

☞ Our cotemporary, the Medical *Observer,* has commendably noticed the existence of the Mdical *Independent,* at the same time does "not know what may be the necessity for a new Medical Journal in the Peninsular State." Will the the worthy Editor kindly inform us how many medical journals are published in Ohio, and in Cincinnati alone ? Then tell us how great was "*the necessity*" for the "Medical *Observer.*"

Nevertheless, we are happy to place it upon our list of exchanges, and at the same time beg to assure the *Observer* that so far from there being *one* Medical Journal too many in the Peninsular State, there is ample room for at least another, provided it were ably conducted.

☞ With pleasure we place upon our list of exchanges, the "Memphis Medical Recorder,"—a Bi-monthly, neatly got up, and well conducted, by A. P. MERRIL, M. D., (Professor of the Principles and Practice of Medicine in the Memphis Medical College, Tenn.,) assisted by his Colleagues.

Miscellany.—MEDITATIONS OF ÆSOX.

Abram—"Do you bite your thumb at us, sir?
Sampson—Is the law on our side, if I say—ay?
Gregory—No.
Sam.—No, sir, I do not bite my thumb at you, sir;
But I bite my thumb, sir."

Romeo and Juliet.

Large bodies move slowly, and to this general statement the fifty thousand, or more, distributors of pills, powders, and potions, in this, our beloved "*ked n'try*," form no exception.

Inured to hardship, and void of physical fears, external customs have unconsciously begotten an internal *sang froid* and impurturbability which encase the professional entity more securely than the armadillo's vaunted shield, or oyster's double valves.

It is unquestionably true, that the vast majority of the fifty odd thousand have "taken up the profession" from the most philanthropic motives. Getting a living by it is merely an incidental fact—the main object is to imitate peripatetic John Howard, and eke

"To drawen folk to heaven, with fairnesse,
By good ensample, is ther besinesse."

It is passing strange that there should be, in any mind, a shadow of doubt that the Egyptian code, which wisely lays down the mode of practice, and punishes departure from it, in any case, with (professional) death, is not yet in full force; and stranger still, that its wholesome edicts should have had maligners.

What an admirable spectacle it is to contemplate the "temples of medical science," and see their priests sacrificing their great powers for a pitiful ten or fifty dollars an hour, when they could, with so much greater utility, kill the cattle for others to "inspect their entrails."

Who can forbear to wonder at that total obliviousness of self which prompts us not to "forget the assembling of ourselves together" in deliberative bodies, wherein the India-rubber men vault lightly upon our shoulders and play such antics before high heaven, in ground and lofty tumbling, that the very angels weep—to say nothing of the lugubriousness of terrestrial spectators?

Where else can we find inculcated more practically the great injunction to submit to the powers that be? Where else is the road to distinction more properly located? Not by new paths, but by following the footsteps of illustrious predecessors, with whatsoever danger of escaping *borborygmi*, or more consistent matters of sense. Astride of no Young American Pegasus, but needful of the cervical vertebraæ,—

"With solemn step and slow,
Like trav'lers to the tomb, we go."

Not by mere knowledge, which the most obscure man may obtain; but by "influence at court." Not by bookish vigils, and seeing eyes. Nor by imperious interrogations of nature, and quick perceiving brains. Not by self-reliant thought, and out-spoken belief. Not by trusting the true, and scorning the false. Not by hearty recognition of new discovery, and eager abandonment of the old delusion. None of these ways, brethren. These things are exceedingly prolific of paradoxes and dogmas, and the authority of a single name may thus strip off fig leaves from old imposture—a thing unequivocally indecorous and undignified.

Don't fasten the roots of your ambition, my aspiring professional brother, in the natural soil, for thence spring many weeds and unwholesome shrubs, but strike them through the rough cortex of some old, and mayhap withered tree, and therefrom, parasitic, you shall derive *sap* to permeate your verdancy, or decaying *debris*, to swell your atrophied tissues.

Sic iter ad estra.

There is still another way thither, and much in vogue. But as this depends upon the explosive qualities of certain professional combinations, the process is not commended—it being problematical which party will seek the zenith, and which the nadir.

It is a matter of amazement, that there are among the outside barbarians who will insinuate that, now and then, there are cases wherein the honor and dignity of our glorious profession are particularly exalted by what, in secular politics, are sometimes irreverently termed log-rolling, trickery and chicane. Even the great convocations of Æsculapian magic, it has been slanderously hinted, smack strongly of *buncombe*, and those who are set up in high places, now and then, owe their position

to friendly wire-pullers at the back door of a committee room, or some other propelling "impulse from the rear."

"A liberal art that costs no pains
Of study, industry, or brains."

But who, may fearlessly inquire, has any better right to manufacture magnates than those who have been similarly created in scorn of the thread-bare absurdity, *ex nihilo, nihil fiat?* Is it not perfectly clear that, to sustain the dignity of the profession, some must be made great and well finished by skilled artisans? And how is this to be done with more certainty than by blow pipes judiciously blown by well-winded blowers? Thus

"We see, with joy, the line immortal run,
Each sire impress'd and glaring in his son;
So watchful Bruin forms, with plastic care,
Each growing lump, and brings it to a bear."

Æsox has wondered why some people have been weighed in the professional balances and found wanting in respect thereunto. He has earnestly sought to discover how this thing shall be remedied.

The proper course to be pursued is, most undoubtedly, "to have a meeting" and pass resolutions demanding of the public unequivocal demonstrations of respect, and that said public shall forbear to think otherwise than we think they ought to think.

Æsop, before Æsox, says the rats once passed similar resolutions with reference to their feline adversary. But who would attach the tintinabulum to grimalkin? *Hoc opus—hic labor est.*

How shall we penetrate the great general opinion, and hang our resolutions about its nuchal region. This is matter for mature ratiocination.

Perhaps it can be done by ceasing to be rats—then will grimalkin's occupation be gone. But Æsox fears that inside of this latter meal heap is another great purring tabby. Grimalkin dearly loves a rat, and may perchance detect it in any other guise. This

——— "puzzles the will;
And makes us rather bear those ills we have,
Than fly to others that we know not of."

For if, having shuffled off this *mural* coil, we do put on the habiliments and spirit of higher intelligence, we shall no longer be enabled to creep through the small holes and narrow passages leading to the public cheese. So shall inanition—very hungry—waste us.

This needs reflecting upon. Is there meat for men, as well as caseine for our present congeners?

To answer this Sphinx question of our times, will be the gist of what will next be said by ÆSOX.

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

VOL. 1. JUNE, 1856. NO. 4.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.—Continued.* By HENRY GOADBY, M.D., F.L.S.

At Fig. 25, we have a highly magnified view of a single corpuscle of the Starch of *Tous les mois*. This plant is a species of *Canna*—extensively cultivated in France—and from the circumstance of flowering every month, it obtains its name—the French signifying monthly, or, every month.

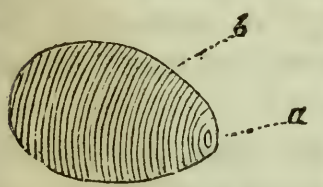

Fig. 25.

Letter *a* describes a small circular spot, always found on some portion of each corpuscle of Starch. Its situation however, is extremely variable; sometimes found as represented in the figure, sometimes at the large end, and it is as often found occupying either side. It is called the "*Hilum*," and is supposed to be an umbilicus, by which the corpuscles respectively gain their attachment to the cell walls. We cannot call to mind, on whose authority this statement is made, but we have no hesitation in saying that the assertion is in the nature of a Myth, for we have never seen in the Potatoe, nor in any other Starch-bearing

plant, any such connection. Around the "*Hilum*" will be seen, a series of equi-distant concentric lines; the whole of this structure is so extremely delicate that it requires high power, and an object-glass of superior definition, to show it at all. Neither is this all, for strange to say, the whole of this minute structure, *belongs only to one side of the corpuscle*, and if the other side chance to be uppermost, the observer will look in vain for the "Hilum," and concentric lines.

The *Polariscope* affords an additional test for the presence of Starch; examined by this instrument, an inconceivably magnificent spectacle presents itself; for in addition to the prismatic colors which surround the corpuscles of Starch, a *black*, alternating with a *white cross*, is rendered visable, by the *analizing prism*, in the course of its rotation.

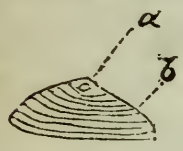

Fig. 26.

For the sake of comparison, we offer an equally magnified view, of a corpuscle of Potatoe Starch, Fig. 26. These preparations having been examined by the same magnifying power, and the drawings made of relative size, the great disproportion existing between them is readily perceived. The corpuscles of the *Tous les mois*, are said to be the largest in the Vegetable kingdom.

We have thus illustrated the subject of Starch as far as we deem it essential for our present purpose; we now desire to establish a remarkable anology in relation to the production of Starch in the animal kingdom, and thus indicate another *link of connection.*

About the centre of the human brain, there are certain minute granules found, known as "*amygdaloid bodies.*" It has frequently happened that when these bodies have been examined by the Microscope, that veritable corpuscles of Starch have been detected among them.

Submitted to the higher powers of the Microscope, the ultimate structure, (the Hilum and concentric lines,) is clearly distinguishable. Treated with the Tincture of Iodine, the Iodide of Starch results; whilst the ultimate test of the Polariscope reveals, now the black cross, and then the white one. Through what agency a strictly vegetable tissue, and of such

peculiar conformation as a corpuscle of Starch, can be produced in the centre of the human brain, no one seems to possess any idea. It is perfectly certain that the stomach cannot be held responsible for its production, in this singular locality, as Starch is rarely taken into the interior of the body as food in a *crude*, but generally in a *cooked* state, and the application of heat to starch invariably bursts the corpuscle and liberates its contents. So, too, the process of *masticating* raw Starch, has the same tendency. Some persons have imagined, that by some means, not clearly defined, and hence not easy to understand, the blood in some way posesses itself of well-formed corpuscles of Starch, obtained from the stomach, carried to, and deposited in the brain. To this hypothesis, there are too weighty objections. Admiting the possibility of the power of the blood to absorb corpuscles of starch from the stomach which we unhesitatingly deny, the corpuscles found in the brain are very much too large to be received into, and transmitted by the capillary blood-vessels; and secondly there are no capillaries, or other blood-vessels in the centre of the brain, its vascular system being confined to the membranes on its external surface.

Other cells there are in plants, presenting contents of a totally different kind, viz. :—Fatty matter in the condition of oil.

In commerce, we are acquainted with a large catalogue of vegetables, producing fatty material in various degrees of fluidity, and all of them, more or less, employed for medicinal or economical purposes. Amongst those which are used for human food, we find many fruits replete with oil cells; thus a thin section of an Almond displays a series of cells, such as are represented in *Fig.* 27, which are more or less intimately filled with aggregated minute corpucles; these consist of oil, in a somewhat inspissated condition.

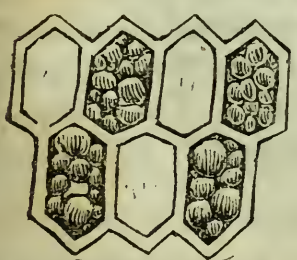

Fig. 27.

Again, if we make an equally thin section of a Cocoa-nut, we shall find a like series of cells, but of larger size, and filled with the same material, as shown in *Fig.* 28.

Fig. 28.

In the drawings made from the preparations just alluded to, and faithfully represented by our wood engraver, it happens that, while some of the cells are quite filled with globules of oil, others are partially, and some entirely empty. The illustrations are true to nature, and the deficiency of oil in some of the cells occurs, in this way: In the act of making the sections the globules frequently attach themselves to the razor, and are thus drawn out of the cells. Others again float out as soon as the section is placed in preserving fluid, the specific gravity of which is considerable, (1,100). In making such preparations, the loss of the oil in certain of the cells, may be regarded as a happy accident, inasmuch as the emptying of some of the cells, by design or otherwise, renders the full ones more conspicuous.

Fig. 29.

In making a thin section of a Coffee-berry, (*Fig.* 29.) we disclose a number of cells, intermediate in size, between those of the Almond and Cocoa-nut, but equally filled with globules of oil.

The reference we here make to two of the nuts, has clearly shown that their interior is entirely occupied with cells filled with oil, and if it were deemed expedient, it would be easy to multiply examples by figuring, and describing, a larger number of the Nut family. We prefer, however, to abreviate this portion of the history of the production of oil-cells, in the vegetable kingdom by merely referring to the structure of a semi or pseudo-nut—*i. e.*, the kernel of fruit. The whole of these, like the true nuts, are entirely composed of cells filled with globules of oil.

By making a thin section of an Apple-pip, we have presented to our view, an arrangement, of very minute and beautifully

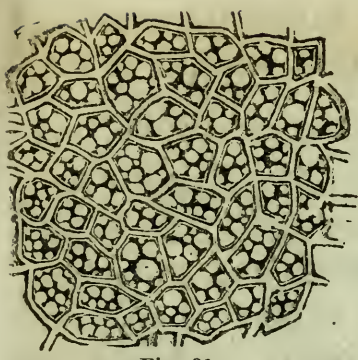

Fig. 30

formed cells, represented in *Fig.* 30, all of them filled with globules of oil as in the instances before adduced. So minute are these cells that we found it necessary to use higher magnifying power to make the drawing large enough to be distinct, whilst the same magnifying power was employed with the former preparations, and their relative size is therefore shown.

We have thus endeavored to figure and describe the receptacles of oleaginous substance in the *vegetable* kingdom, and it now becomes important for us next to consider whether there be any corresponding formation in the *Animal* kingdom.

It is well known that all animals have a great disposition to accumulate fat. Some individuals, or species, to a greater extent than others; age and sex governs the production of this material, to a great extent. Thus, in the human subject, the *young* have more tendency to develop *adipose* tissue, than the *old*; *females* than *men*. The beautiful, rounded contour of the female form, in contra-distinction to the sharp, angularity of man, is solely due to the greater depth of adipose tissue, associated with the integumentory covering. In the human subject, too, it happens, that fat forms the last and most important layer of the skin; and from its uses, no less than its composition, it deserves to rank as a distinct and independent tissue. It forms a soft and highly elastic cushion, on which the glandular and vascular structures of the skin repose.

Hybernating animals, down even to the Reptiles, are conspicuous for the accumulation of a great store-house of fat, (after the breeding season is over,) during the Summer, and Autumnal months, preparatory to the passive condition they will assume during the Winter season.

Whoever has noticed these creatures emerging from their concealment, at the first dawn of Spring, must be struck with the attenuated, abject appearance, that they never fail to exhibit at this period.

They have exhausted their fat—it has constituted the sole

pabulum, upon which they have existed during the months of semi-death. But what is fat—how, and of what, is it composed ?

Adipose tissue, or fat, consists of a great quantity of cells, which are in many animals nearly, or quite round, but in man they are polygonal ; all of these are filled with a fluid oil. They do not, however, constitute layers of distinct cells, but, on the contrary, they are divided into *lobules*, each of which possesses its own vascular system, Each lobule has its artery, for the supply of the capillary plexuses, and a vein to receive and transmit the blood, when the cappillaries are done with it. In addition to the vessels seen on the external surface of these lobules, respectively, there is an internal arrangement of the capillaries in the form of delicate circular vessels which surround the several fat cells. The oily secretion, being eliminated by these vascular twigs, from the blood which passes through them.

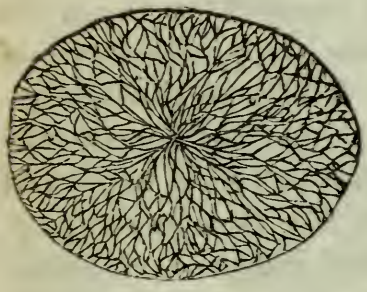

Fig. 31.

Fig. 31 respresents an injected lobule of human fat, copied from a dried preparation in our possession. An aggregation of vessels in the centre, denotes the point where the artery ceased, and a corresponding part on the other side of the lobule would show the commencement of the vein at a similar point. The preparation being dried, and preserved in Canada balsam, the fat cells are obliterated, and the lobule itself has collapsed, so as to present a uniformly flat, rather than a rounded surface. The whole of its interior, however, was occupied by a number of oil cells, and the aggregation of such lobules constitutes the adipose tissue in the animal kingdom. The probability is, that fat is broken up into an infinite number of small masses, for the convenience of affording the individual cells, the requisite supply of blood, as by this arrangement a great number of distinct centers of circulation are established.

Fig 32.

The fat cells filled with oil are shown at fig. 32. Notwithstanding the rounded appearance, they are human fat, but as they constitute a delicate preparation, preserved in fluid, the pressure to which they are subjected by the glass which covers them, has tended greatly to dissipate their former polygonal figure. We always prefer, however, to present the specimens as they are found in our cabinet, without any alteration whatever.

Oil in the vegetable or animal kingdom, is divisible into a fluid portion, called *oleine*, and solid portions known respectively, as *Stearine* and *Margarine*. In old animals it commonly happens that a separation of the fluid, from the solid matters with which it was combined, takes place within the cells, and subsequently to separation, the solid matter crystalizes. A single cell of human fat is shown at Fig. 33, magnified 560 diameters, in which the crystalization of the Margarine is represented at letter *a*. By comparing Fig. 33 with Figures 28, and 29, a great similarity of form will be observed; but other vegetable cells heretofore figured, much more nearly resemble the form of cells constituting adipose tissue in man, and animals.

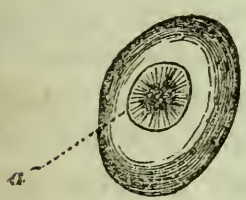

Fig. 33.

Thus it has been shown that the secretion of fatty matter is common to both kingdoms, and that in each, cells are specially formed for its reception; herein we have demonstrated another *link of connection*. The development of mineral matter is also common, to the vegetable, and animal kingdoms. The situations in which it is found are various, as the kind of mineral on the one hand, and its economic value, and importance on the other.

Many plants have a paramount necessity for the *carbonate of lime;* with its assistance they luxuriate and thrive remarkably, but without it they dwindle and perish. The *onion* affords an example of this kind. If the outer skins of the onion be ex-

amined by the microscope, the well-formed cells will be found occupied with prismatic crystals of some mineral, such as shown at Fig. 34. Whenever two or more of these crystals are found in one cell, they always approximate, and have a great tendency to form crosses—either a *right angled*, or St. Andrew's cross, such as are seen in the Figure—they never lie side by side, or separated by an interval of space. Subjected to chemical analysis these crystals prove to be the *oxalate of lime*. It seems somewhat remarkable, and even mysterious how a plant that has fed upon *carbonate* of lime, should elaborate within its interior crystals of *oxalate* of lime. The fact is, that the onion generates oxalic acid it its cells, and this, combining with the carbonate, (for which it has great affinity) produces the oxalate of lime, and the combination of the two is so nicely balanced as to admit of the process of crystalization. It will be seen, therefore, that in this instance, the lime performs a very essential service, by combining with, and rendering harmless, a deadly poison—for such is oxalic acid—and naturally neutralizing each other. This we must regard as a beautiful adaptation of the laws of chemical affinity, tending to produce a vegetable grateful and nutricious, out of poisonous materials.

Fig. 34.

Other cells than those hitherto described are adapted to the reception of another form of mineral matter, viz: *Silica*. The cells constituting the bark of the Apple, and many other trees, are found on examination to present crystals, or spiculæ of Siliceous earth, and this is continued in many plants and trees, (Maple and others) to the cuticular coverings even of the leaves. Fig. 35 represents the upper cuticle of the leaf of a plant, in which are seen minute needle-shaped spiculæ of Silica. These are called *Raphides*, from the Greek *Raphis*—a needle. The crystals of the onion are also raphides.

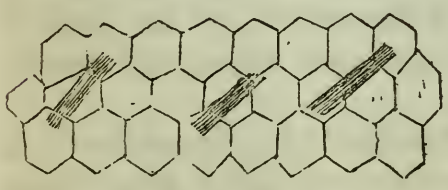

Fig. 35.

To be Continued.

ARTICLE II.—*Opium in Fevers*—By J. C. GORTON, M. D.

It is not my object, in this communication, to theorise upon the *operandi* of Medicines, in their effects upon the human system, in disease or health, leaving that to be settled by your professional readers, as shall best please their preconceived opinions.

The object is to give the result of my experience, extending over a period of fifteen years, in the use of large doses of opium, in the various forms of Fever, classed under the general name of *Billious*, which are so prevalent over a great part of the United States.

This Fever is, in truth, one of protean form ; we daily witness it presented in a thousand different modifications, from the mildest Intermittent to the most aggravated type of Yellow Fever, in whatever latitude, whether within or without the Tropics. In whatever livery it may appear, we believe its active cause to be the same, however it may be modified by local influences. My opinion is, that the first appreciable event in the chain of sequences constituting fever, is a functional injury to the Nervous system, and the invariable consequence of this affection of the Nervous system, is a *functional* derangement of the secreting organs, but more especially of the Brain.

The belief that Opium, in large doses, exerts a pernicious influence upon the brain, is so strong in the minds of the Profession, generally, that the bare suggestion of giving a five grain dose of Opium, in Fever, will be regarded as a most dangerous and reckless experiment. Instead of large doses of this drug having a tendency to aggravate cerebral symptoms, which occur in the latter stages of fever, it is very often the only remedy that will prevent a fatal termination.

It is to the peculiar applicability of this remedy in the more malignant form of congestion, and Typhoid Fevers, which has prevailed so extensively for the last few years, that I wish to call the attention of the profession.

Previous to 1842, in the central part of the State of New York, a region consisting of high hills, relieved by deep and narrow valleys, it was extremely rare to see any fever, except

the most common Remittents, and those at long intervals. For two years prior, this region had been affiicted with epidemic Erysipelas, so prevalent as to effect, in a space of ten square miles, three individuals out of every five.

In the Autumn of 1842, a low grade of congestive Typhoid Fever made its appearance so suddenly that in one neighborhood, within one week from its commencement, ten individuals were suffering under its influence. From that place, during the next six years, it spread over a great part of Otsego and Chenango Counties; and there was great mortality attending this disease under the ordinary mode of treatment, occasioning so much alarm among the inhabitants, that it might well cause the Medical attendant intense anxiety to know if something more could not be done.

I had read "Dr. Stokes on Fever," and his Lectures, quoting from Dr. Latham, recommending the use of small doses of Opium, one and a-half to two grains, when the irritability of the Sensorium seemed to out-run the general symptoms, thereby disturbing the whole circulation, as evinced by low delirium, picking bed clothes, subsultus, &c. In these cases he says,—"If the patient can be saved at all, it is by Opium."

I made a trial of it, as advised by him in this stage, with an ameliorating, though transient effect; my patient sank, notwithstanding quinine and all the usual remedies. I had seen the utility of larger doses of opium, in conjunction with calomel, during the winters of 1840 and 1841, on the borders of the Canebrakes, and in the towns on the Alabama river, from Mobile to Wetumpka, in many cases used, as I then thought, with great effect in relieving the patient, of the more urgent symptoms. This determined me, in view of my previous failure in the treatment of these fevers to make a trial of a *larger dose* the first opportunity that should occur, and with what success the following case, selected from my note-book, will show, administered after the system had not only been reduced by disease, but what I should now call *gross mal-practice.* This being the first instance in which I had ventured to use a *full* dose, it possessed for me an absorbing interest.

A. Thompson—a blacksmith, aged twenty-three—was at-

tacked on the 27th day of December, 1842, with the ordinary symptoms of billious intermittent fever. I saw him on the second day of this attack ; bled him, gave an emetico-cathartic, of Ipecac and Calomel. The case progressed under the ordinary treatment, without anything occuring to excite apprehension, until the eighth day—when the symptoms assumed a decided Typhoid character.

My hope had been to excite mercurial action, but none appeared. For forty-eight hours the remedies were continued without benefit, the patient gradually sinking—when on the tenth day of the attack in the afternoon he became drowsy, with subsultus tendinum. These symptoms became rapidly aggravated, and I gave, as my opinion to the family, that the case must terminate fataly in course of the night. Subsultus, stertorous breathing was then present with a rapid feeble pulse. I proposed as a last resort, to give him four grains of opium, five of quinine, and three of calomel, to which they readily assented, believing that if it did no good, it at least could do no harm. The dose was administered, and the patient was left for the night, with the expectation of finding him dead, at my next visit. At four in the morning, I was again at his bed-side, and to my great joy found every symptom, that had seven hours before threatened a speedy dissolution, entirely removed. The mind collected, skin and tongue moist, pulse about one hundred —soft and distinct. Small doses of morphine with quinine and brandy, laxatives and light diet, perfected the cure, so that on the twentieth of January, my patient was discharged, cured, and was one year ago a living monument, (as I believe thousands of others might have been), of the efficacy of this drug, in four or five grain doses, given at the proper time.

I have reported this case somewhat in detail to show that opium, so far from aggravating the tendency to coma, which supervenes the latter stages of fever, is in reality the only remedy that can be relied on for its cure. And I believe that nine out of ten of my own cases of a similar character, that terminated fatally, might have been cured by a timely resort to this remedy, and I am greatly strengthened in this opinion by the fact that, from that time to this, I have scarcely lost a

case of billious remittent-fever, where I could control the treatment in time for the administration of this remedy. But in order to procure the result, I resort to its use early, with a view to prevent the typhoid stage entirely, and often secure a favorable crisis about the fourth or fifth day. I do not say that cases never do occur in which this remedy would be injurious; no man's experience extends to all the possibilities of disease. If the head is hot, cheeks flushed, patient thirsty, with a tendency to coma, occurring in the early stage of attack, I premise the treatment by mercurial cathartic (five or six grains of calomel, followed by ol-ricini) for the purpose of evacuating the alimentary canal, and exciting the secretion of the liver.

Detroit, April, 1856.

ARTICLE III.—*Trance Coma.*

We have seen that the causes instrumental in the production of the *Death* Trance are chiefly *sudden depression;* i. e. the speedy reduction of a healthy body to a state of complete prostration. The causes which produce *Trance Coma* are of two distinct kinds:—either the state of complete repose, which succeeds severe hysterical affections, or it is induced by a slow and steady decrease of the vital powers, the concomitant of disease, as represented in Fever, or any other slowly depressing malady. Under such circumstances, the body gradually and insensibly glides into Trance Coma.

The ostensible characters which distinguish this form of Coma from Death Trance, are thefollowing, viz: the circulation of the blood is more or less reduced, but in some condition it continues; the function of respiration is subdued, but not extinguished; and a degree of vital heat maintained commensurate with the diminished power of the heart. These characteristics are necessarily modified by the severity of the attack. Sometimes they are so palpable that no one would think of regarding the patient as dead, but simply in an unusually profound sleep. On other occasions, the vital processes are minimized to

such a degree that no action is perceptible; under all circumstances, speech and muscular motion are suspended.

There is, however, one peculiar and remarkably characteristic phenomenon pertaining to this, which has no similitude in any other form of Trance—that throughout its duration the patient's *brain is active*, and invariably the seat of the most delightful dream visions; *these dreams always being of Heaven.*

We have been quite familiar with many cases of Trance Coma, which, although differing as widely as the poles assunder, in every other particular, have all agreed in the character of the dream. The following case will forcibly illustrate this point:

Many years ago a Jewess of great beauty, who had led an abandoned life, was taken sick, and passed into a state pronounced death by all except a faithful attendent, who did not believe her mistress to be dead, and refused to allow any preparations for her funeral, but kept her warmly covered in bed.—At the end of two weeks she recovered, and said, "Mary, has it thundered?" "No," was the reply. "Are you quite sure that it has not thundered?" "I am, indeed," was the reply, "besides, it is December, and near Christmas day." "That does not matter," said the Jewess: "I have been in a trance and seen the Lord, I begged of him to forgive me my sins. He looked sternly at me and said no: you have been so wicked that you must be punished. I fell upon my face and implored him to forgive me. He looked thoughtful, and at length said: "I will consider of it, and, if I consent, will apprise you by a peal of thunder." She had scarcely finished this recital when a flash of lightning illumined the room, instantly succeeded by one heavy clap of thunder. The woman clasped her hands in exstacy, exclaiming, "Thank God—I am forgiven!" and expired.

This dream of the Jewess is perfectly consistent with Trance Coma; the only difficulty is in relation to the thunder, and this has been very hard to account for. The fact is well known that in certain conditions of the body, the perceptions, so far as the nervous system is concerned, become singularly acute, and whilst it is notorious that many persons in good health feel

the influence of approaching thunder ; it is easy to understand that the Jewess not only felt it, but it became strangely incorporated with her dream-vision. We can confirm this phenomenon by our own experience.

A young woman, connected with the Theatre of Toronto, lost her mother, who was conveyed to Niagara City for interment. The daughter attended the funeral, and returned to Toronto in a state of great mental and physical depression. She went to bed, and the next day was found in a state which the people of the house, and a physician who was called in, pronounced *dead.* Two females occupied themselves in preparing the body for interment, when one of them exclaimed, "Oh! she is quite warm ; do put your hand here. I can feel her heart beat ! The other did as requested, and declared that she felt faint pulsations of the heart. "I wonder," said the first, "whether she is really dead ?" "O, yes," said the other, "to be sure she is dead enough;" and without giving themselves any further trouble about it, they allowed her to be fastened down in her coffin and taken to Niagara City, where she was buried in the same grave with her mother. We suppose that no one can doubt, for an instant, that this was a lamentable case of premature interment, and if they had sent for the physician who had pronounced her dead, the pulsation of the heart must have led him to a different conclusion, whereby her life would have been saved.

To show the frequency of Trance Coma, we have extracted from the daily papers no less than six cases, since the first of April, and append five of them.

Wanting to Bury a Man Alive.—The *Courier des Etats Unis* has the following recital, which it pronounces as passing strange, and which, for the honor of the French name, it trusts is untrue, but the facts are obtained from so responsible a sourse that the editor feels at liberty to give it to the public. He says: "One of our countrymen, named Gilbert, without relatives in New York, found himself, some time since, sick in a French boarding house, on Laurens street. Attended by Dr. ——, he nevertheless called, on the 20th inst., on Dr. Petitjean, to know as to his treatment. Dr. Petitjean approved of the treatment prescribed by his *confrere*, reassured the sick man, and promised to see him again.

Friday last Mr. Gilbert fell into a sort of lethargic stupor, and so continued, causing the nurse to believe that he was dead. In the morning the nurse announced down stairs that the sick man had died. Then ensued an incredible controversy, and a scene still more incredible.

Dr. —— and another of his *confreres*, who was called, were loud in proclaiming that the patient was dead; on the other hand, Drs. Petitjean and Sidorovitch contended that he was but in a lethargic state. It seemed that pending these sad doubts it was due to the unfortunate that some attention should be paid to him, but the proprietor of the house declared that 'dead or not dead, the sick man should be carried out of the house that same day.' Dr. —— furnished a certificate of death, the permission to inter was obtained, the coffin brought, and without scruple they were about to proceed to the burial, less than twelve hours after the supposed death, if Dr. Petitjean had not returned in time to put a stop to so iniquitous an act. His energies in opposition triumphed over all resistance—the sick man was released from the shroud. *The pulse and the heart beat sensibly.* At the last hearing that we have, Mr. Gilbert yet lives, and is fast approaching recovery in the hospital where he was carried."

The Danger of Burying Too Soon.—The danger of too rapid interment was exemplified in a very extraordinary manner recently, according to one of our exchanges. A young man who had been suffering from a malignant fever, to all appearances died. To avoid the danger of infection which might arise from a corpse remaining in the house all night, a coffin was immediately commenced, the certificate of death sent for, and urgent application was made to the incumbent of a church to allow the corpse to be interred the same evening. This, however, he declined, considering the proceeding too hasty, but consented to the interment taking place the following morning. The result proved the propriety of the delay; the grave was dug, and the coffin ready, but the dead man, in the course of the night, made signs of returning animation; and at the hour fixed for the burial, was in the comfortable enjoyment of a cup of coffee, which he had requested, with every prospect of recovery.

Buried Alive—Almost.—The Fremont, Ohio, *Journal*, of Tuesday, says: We learn by a friend that Mr. Daniel Sterns, of Madison township, in this county, who has been ill with fever for some time, to all appearances died on Friday afternoon last. His burial was to take place on Sunday afternoon. All the necessary arrangements were made, friends assembled to pay the last tribute of respect to their deceased neighbor, and the minister was in waiting to offer the consolations of the gospel to the afflicted family. The coffin was then brought, and the body was being placed therein, when one of the assistants observed that it felt a little warm, and, strange as it may seem, in a few minutes Mr. Sterns was sitting up; the friends who had assembled for a funeral went home more happy than if they had attended a wedding.

Singular Resuscitation at Rockford.—The *Register* gives the particulars of a singular case of resuscitation after supposed death in this city:

A child had, to all appearances, died, and was laid out in its little winding sheet upon a board in a supper room while the other preparations were going forward for the funeral. The sexton was notified, and the grave also dug. Sometime after, the father went into the room where the child was, and was astonished at its calling him by name, and complaining that it did not lie good. Of course the little sufferer was supplied with a

better bed at once. It had evidently fallen into a trance, from which it was awakened by a hard bed and cold air.

A young man at Wakefield suffered from a malignant fever. Life seemed to have departed, and the people around, dreading infection, wished to inter the corpse the same day, but a clergyman refused to concur in such indecent haste. During the night the coffined and supposed dead man proved to be alive, and seemed in a fair way to recover.

We trust that we have shown conclusively that this disease is of very frequent occurrence, and that the subject is not only of great importance to the community, but worthy of more attention from the Medical Profession than it appears to have received. H. G.

ARTICLE IV.—*Acute Rheumatism—By* WM. COWAN, M. D. *An Essay read before the Detroit Medical Society.*

The importance of the causes, nature, and treatment of Rheumatism, is manifest, when we consider the bodily suffering which is undergone during the acute stage, the debility and incapacity for mental or physical exertion induced by the disease in its chronic form, and the ultimate organic changes which its confirmed continuance produces—viz., fibrinous deposits, and organic disease of the heart, with all its attendants of fearful aggravated and protracted suffering—for Rheumatism is not like many other diseases, confined to, probably, one attack during life-time. But the constitution of the person afflicted, having once taken on the habit as it were of the disease, seems, far more liable on any recurrence of the causes, whatever these may be, to more and more severe and aggravated attacks, on each succeeding accession. Until at length, the disease having become chronic, the various joints of the body become swollen, distorted and deformed, and by metastasis, the heart itself becomes implicated. In the consideration of this subject, I do not expect to be able to lay before you anything very new or striking, but will endeavor to collect and collate what has been said and written on it by the most prominent authorities of the present day, and from thence draw inferences. I will confine myself at present entirely to the subject of Acute Rheumatism.

Causes.—The causes of Rheumatism, as stated by Dr. Hooper, are said to be predisposing, hereditary predisposition; the male sex; previous attacks; age from 15 to 60. Exciting, exposure to wet and cold.

Dr. Watson, in his lectures, says:—"I know of no other exciting cause of Acute Rheumatism than exposure to cold, and especially cold combined with moisture, and this is the reason why the disease is so very common among the poorer classes of society, who are more in the way of that cause and cannot guard against it so effectually as their wealthier brethren—among whom it is comparatively rare. The cold, probably, exercises its injurious influences by checking the elimination thro' the skin, and other emunctories of the poisonous principle as it forms, and thus accumulating it in the blood."

"Acute Rheumatism," he says, "is chiefly a disease of youth, prevailing mostly, I believe, from the age of puberty to that of thirty-five or forty. I have repeatedly, however, seen it in children—sometimes as early as the third or fourth year, and the chance of the joint affection being complicated with rheumatic carditis is the greater in proportion as the patient is the younger."

I may here state that I have myself seen, in this city, two very severe cases of Acute Rheumatism in very young children, the one a girl aged about five years, the other a boy aged about eight. Although neither were complicated, so far as I could discover, with cardiac disease, and, though both patients had two or three very severe attacks, they recovered and have now been well for more than a year.

Dr. Geo. B. Wood, in his work on the practice of medicine, says:—"Almost the only known exciting cause of Acute Rheumatism is cold. Moisture increases its effect, but, in all probability, only serving as a more rapid conductor, than the dry air." He says, however, that "something more is requisite than cold." There must also be a peculiar state of the system predisposing to this form of disease. There must be a rheumatic diathesis. "In what this diathesis consists, has not been discovered. There are no signs by which its existence can be detected with an approach to certainty. Large jointed, mus-

cular and lank frames are, probably, more frequently effected than those of opposite characteristics. Men are more subject to the disease than women, but, in all probability, because more exposed to vicissitudes of temperature. The predisposition is certainly much affected by age. Children under ten years, and adults over sixty are seldom attacked, and the period of life at which the disease is most prevalent, is, probably, between fifteen and thirty-five or forty. Among the most powerful predisposing causes of the disease, is a previous attack. At least persons once affected are more liable to the complaint afterwards, than they had previously been, and when it occurs in the old it is almost always in those who have been attacked at an earlier period of life. I think it is no less certain that a predisposition to the disease is often inherited. It is very apt to exist in members of the same family, whether inherited or not. Debility appears to favor the predisposition, though full and vigorous health does not afford protection. The diathesis, when strong, is alone sufficient to generate the disease without the aid of exciting causes.

The latest writer on the subject of Rheumatism, Dr. Henry William Fuller, assistant Physician to St. Georges Hospital, London, from whose excellent monograph on this disease I shall, without any prefatory apology, make copious extracts, says :— "Many persons consider exposure to cold sufficient to induce an immediate attack, and though rheumatism not unfrequently occurs without the slighest exposure, though even when exposure has taken place, fresh joints are attacked long after all exposure has ceased : nay, more, though the ascertained local and general effects of cold differ altogether from the symptoms of rheumatism, yet some, even among the profession, have been found to adopt this prevalent notion, without an attempt to show that cold either does or can produce the effects assigned to it.

"It will be observed," he says, "that the phenomena produced by cold, are totally unlike the symptoms of Rheumatism. No wandering pains; no redness, or swelling of the joints; no symptoms, indeed, of any moment present themselves, unless the cold be intense, and even then they bear no resemblance to

the symptoms of Rheumatism. Nay, more than this, the experience of travellers has proved beyond all question, that in healthy persons the most extreme and rapid variations of temperature are insufficient to excite the disease. In a note appended to this part of the work, he says: "Capt. Parry, in his account of a voyage for the discovery of a North-West passage, observes: "We were constantly in the habit, for some months, of undergoing a change of from 80° to 100°, and in several instances of 120° of temperature, in less than a minute, and what is most extraordinary, not a single inflammatory complaint, beyond a slight cold, which was cured by common care in a day or two, occurred during this particular period. Throughout the expedition, the occurrence of Rheumatism, or even, indeed, of Rheumatic pains was exceedingly rare." From an experience of two voyages which I myself made to the Arctic regions, on board of a whaling vessel, with a crew consisting of fifty individuals, who, from their avocation, were much more exposed to the inclemencies and vicissitudes of Arctic weather, than the crew of a well-provided discovery ship could be—the men being often exposed in open whale-boats for four-and-twenty, and even sometimes eight-and-forty hours together—out of a fleet of from twenty to thirty ships so manned, during the whole of two voyages, I do not remember even of hearing of a single case of Rheumatism. And during many Tropical voyages which I have made also, in all parts of the world, the sailors constantly sleeping on deck, exposed to showers of rain, night dews, and every other atmospheric influence, I do not remember of having seen a case of Rheumatism among my men, which could be attributed solely to the influence of cold. That cold, therefore, is not essential to the production of Acute Rheumatism, is, I conceive, clearly and abundantly proved by the foregoing facts. That many of the causes, as stated by Hooper, Watson, Woods, and others, such as hereditary predisposition, previous attacks, the age and sex of the individual, debility, &c. &c., may be, and are, remote or predisposing causes, to which may be added insufficient clothing, damp and ill-ventilated lodgings, cannot admit of any doubt; but we must search for something more definite, and

more specific than all this—some *materies morbi*, which will account for those symptoms which we cannot attribute to the effects of cold. But before proceeding to inquire into this, we will first go over the

Symptoms.—The symptoms of Acute Rheumatism are first, general depression and lassitude, succeeded by a distinct chill, or rigor; pulse full, hard, and from 100 to 120 and 130; tongue covered with a white fur; bowels obstinately costive, urine scanty and high colored, and chargéd with lithates, and the evacuations per anum, if any, are of a clay color, and almost entirely devoid of bile. There is coldness of the extremities, and the skin is sometimes covered with a profuse acid perspiration. The saliva, the urine, and contents of the bowels, are all highly acid. The conjunctivæ are yellow, and there is a disagreeable, bitter taste in the mouth. In course of a short time, fever, of a remittent or intermittent form, sets in; one or more of the large joints of the body, as the elbow, wrist, knee, or ankle, become swollen, red, highly inflamed and painful, and these latter symptoms, viz: the fever, inflamation and pain, almost invariably suffer an exacerbation at night. The appetite is gone, and the thirst of the patient is urgent; the pain and inflamation of the joints is of a migratory character—shifting from one joint to another, without any abatement of the pain or inflamation in the joint, or joints first attacked; at others, leaving it or them entirely free from either. It sometimes, and if of frequent occurrence, extends to all the joints of the body. These symptoms generally abate in about a fortnight, and in from five to six weeks the patient may be free of the disease; but this amendment scarcely ever takes place uninterruptedly. These are its uncomplicated symptoms; but the disease very often assumes a Chronic form, and in many instances the inflamation extends to the fibrous textures of the Heart—the symptoms of which—sudden pain in the precordial region, palpitation, dyspnœa, pain in the intercostal spaces, and pain on lying on the left side, must be early looked for, and combatted; otherwise dire effects may follow—as hypertrophy, dilatation, and valvular, and other organic disease of the Heart.

Where, in all the symptoms just detailed, is the effect of cold to be discovered as a cause? Up to a certain point—Fuller says, "cold produces muscular contraction, and imparts vigor to the system." Also, "when any part of the body is subjected to a low temperature, or to the combined influence of cold and moisture, the first symptom of such exposure, is a sensation of cold in the part exposed, accompanied by pallor, or blueness of the skin. If the exposure be of short duration, and the degree of cold moderate, the circulation is soon rëestablished after removal from the cold, and no ill results ensue.

"When the degree of cold is greater, or the exposure of longer duration, a shrunken state of the skin supervenes; the circulation in the part is partially, and sometimes almost entirely, arrested, and when warmth is again applied gangrene may result if care be not taken to prevent reaction taking place too rapidly. If proper caution is observed, nothing unusual is remarked in the part beyond a temporary glow, or increased heat, which gradually subsides altogether." Now what do we observe in Rheumatism at all analogous to this, the common effect of cold, to warrant us in assuming that the effects of cold have any thing to do with the causes of Rheumatism excepting in a very remote manner. We have already seen that exposure to the extreme cold of an Arctic climate, or to the vicissitudes of a Tropical one, are insufficient to account for its production by the agency of cold, and we must, therefore, seek for a more specific cause, and this cause I believe to be a *blocd poison*—a theory which has, of late years, had many advocates; and I think I may be allowed to say that even those who wonld be inclined to doubt this theory, or contradict the conclusions to be arrived at from it, do tacitly admit it nevertheless by their use of those remedies in the cure of this disease which have a tendency to act as eliminatives and hæmatics. It may be said, also, that if the disease arises from some blood poison, we must even then go still farther back for some other cause to account for it; but this only brings us back to where we started from, namely: the remote, predisposing, and exciting causes which have already been enumerated. I have, therefore, only to say, in further answer to those objections, that whatever

cause may induce intermittent, remittent fever. or typhus, all of which may be characterised as blood poison diseases, and caused by derangement of the nervous centres ; that malarious influence will also bring on an attack of Rheumatism by poisoning the blood in the same way, for, although the malaria itself, which is supposed to be the cause of these diseases, does not probably contain all the elements which go to form the blood poison ; still, by the depressing effects which it produces on the nervous centres, thereby setting up a diseased action, or rather producing a want of action whereby the usual healthy blood-making process is disordered, and causing the usual emunctories of the body to suspend, in a great measure, their functions of throwing off the effete material of the animal machine ; it, (the malaria,) by these, its effects, tends thus to accumulate a poison in the system which was probably at first only infinitessimal in quantity. Similar, indeed, to the action which is produced by the act of vaccination, thus spreading a minute quantity of virus through the whole body, or, also, similar to the action of a minute quantity of yeast, causing fermentation in a substance 100 times its bulk. I say the blood poison of Rheumatism may be caused by malaria, or by any influence, however exerted, which may cause a derangement of the pure blood-making or assimilative process ; but I believe it may also be caused by a simple attack of Dyspepsia, and in this particular it assimilates itself closely to Gout, with which disease I consider it in many, if not in all respects, identical ; the one being only a more aggravated form of the other, and subject to the same laws of propagation and treatment ; but it appears to me that the clearest proof of its being a blood poison exists in the migratory character of the arthritis, the shifting suddenly, without any apparent cause, from one joint to another, from the acidity of the saliva, perspiration and urine, and also from the fact of the heart becoming, in the great majority of cases, sooner or later affected. Indeed, it is said to be so affected often previous to any arthritic symptoms whatever appearing. If then it be proved that a blood poison or mal-assimilation, which is the same thing, is the sole cause of Rheumatism, we have come to a more solid and substantial basis for its

national treatment, for whatever that poison may eventually prove to be, (and it has yet to be demonstrated) the true mode of treatment will be to use those remedies chiefly which have a tendency to eliminate any thing abnormal, or with which the system may be surcharged. And what do we find to be actually the case? Why those very remedies which I have just mentioned are what have been in daily use for years, even before it was suspected of being a blood poison, and which still continue, and justly, too, to hold their place in the confidence of the Profession. To these remedies I shall now briefly direct attention, and first of all, with regard to depletion, both locally and generally. Although bleeding may, and does, in many instances of active Inflammatory Rheumatism in the young and robust, produce a temporary good effect by lowering the action of the heart and general circulation, and thus moderating local action; yet I believe it has been too much the practice to resort to it without considering its after effects, for though many cases may and do recover after bleeding, still there are many other remedies of a less heroic kind, which are equally beneficial in controlling the action of the heart and general circulation without producing those debilitating effects which result from copious general depletion, and which, added to the debility of the disease, make the patient's recovery very slow and doubtful, and even render him sometimes debilitated and incapable for years, and not only so, but I firmly believe, tends, by the increased amount of work which is thus put upon the heart to sustain the diminished circulation of the arterial fluid to irritate that organ and produce that very inflamation of its investing membranes, which we ought so studiously to avoid, and not only this, but in a climate such as this is, surrounded by malarious influences, which causes almost every acute disease very quickly to assume an asthenic form, I doubt very much the propriety of general depletion at all in this disease, or in almost any other of an inflammatory nature; and although I would not altogether lay aside the use of the lancet, I would put it quietly on a shelf to look at and to remind us that we have yet within our reach a little instrument, great for good or evil.

With regard to topical bleeding, either by leeching or

cupping, there can be no such objections, from this and warm fomentations, I have seen much and decided relief quickly produced. I have, also, experienced, in my own case very great relief from the application of moist bran poultices as hot as the skin could bear it, and thus have often been enabled to pass a night in the comfort of quiet repose, which would otherwise have been passed in misery.

The next remedy which requires notice, is that of purgation, and there is none more valuable, if rightly used. I do not mean, however, to say that calomel and opium ought to be given every night and black draught every morning as some have recommended, would be at all judicious, as you would thereby tend to exhaust and debilitate your patient as much in this way as by bleeding ; but I do say that a calomel cathartic given now and then, say every second or third night, according to circumstances, and followed by a black dose, or some of the of the neutral salts, and accompanied by other remedies to be hereafter named, is a valuable means of cutting short an attack of Acute Rheumatism.

Of the value of opium in large doses to alleviate pain, I cannot speak, as I have never had occasion to use it unaccompanied by other remedies. Neither can I speak much of the value of Tartar Emetic ; but as regards the value of Colchicum combined with calomel or Blue Pill and Opium, I can safely say there is none more valuable, both as a purgative and eliminative, and none to which I would trust more in the treatment both of this disease and Gout, in combination of course with the other purgatives, already named, and taking care at the same time not to give sufficient to produce a depressing effect. By these means the active inflamation is very speedily subdued when Quinine, in regular repeated doses, very soon restores tone to the system, prevents the further accumulation of the poison by assisting the assimulating process, and prevents a recurrence of an attack. In Iodide of Potassium, Guiacum and Nitrate of Potash, I have little faith, but they may be all very well, occasionally, as adjuvants to the other treatment.

ARTICLE V.—*The Gypsum Beds of Grand Rapids, Michigan—Mineralogically and Geologically considered.—By* WM. H. DECAMP, M. D.

Notwithstanding several competent Geologists have made mention of the deposit of Gypsum, here found, we are still destitute of a written account, that will convey to those not seeing it, its quality or geological age and position.

Mineralogically.—It is found to be made up of several varieties of Sulphate of Lime, considerably distinct from each other, and yet they commingle to a certain extent.

At the surface of the quarries, now opened is found among the clay and argillaceous slate, thin stratifications of Acicular Selenite, which appear to have resulted from the detached masses of Gypsum found in the clay, and diluvial covering above, which are becoming soluble by the water percolating through these to them ; and then depositing itself in this new form. At some of the exposures, the general beds of Gypsum, if not protected by clay or slate from moisture, are covered by a strata of fibrous Gypsum, from two to fourteen inches in thickness, having its fibres invariably in a vertical direction. This is of a redish semi-translucent color, resulting from a slight trace of iron, which abounds in most of the water from springs in the soil.

From the great regularity with which we find this deposited, where the soil contains gypsum boulders, evidently resulting from the remaining portions of former strata, while none of it is ever found where the beds are protected by clay and other solid materials, we must certainly infer that it is of a recent formation.

Beneath this is found the granular and compact varieties, closely intermingled ; with an occasional admixture of the anhydrous gypsum and selenite.

The upper portions are of a dark colour, richly mottled with pink and white, of sufficient firmness of texture to compare well with the softer forms of white marble. It is from this portion of the beds that suitable blocks have been sawn to construct the fronts of some of our most costly buildings. These, when polished in the wall, and well coated with linseed oil, to

protect them from decomposition by moisture, present a most beautiful appearance.

As we descend, it becomes of a more granular character, and of a nearly pure white color.

As yet, in the portions brought to view there has been nothing discovered that gives any evidence of other mineral substances existing imbeded in it ; as native sulphur, garnets, hornstone or mica, which are generally associated with and characterize primitive gypsum.

Neither has there been found any traces of organic remains, either animal or vegetable, which are found in abundance in the most recent formations, as the gypsum beds of France near Paris. No perfectly formed crystals of Selenite have been found, nor any samples of the snowy and branched varieties of gypsum.

Its specific gravity, I find to be 2,27 : and one cubic inch weighs 1 oz. and 180 grs., which equals 1,485 lbs. to cubic foot, which would give one ton to every 13,4 cubic feet ; or a fraction over nine tons to every cord. It does not effervesce with acids, and gives no evidence of an admixture of silex, or carbonate of lime.

Geologically—Considered, in respect to its age of development and position, it becomes necessary to give a somewhat elaborate account of the rocks above and beneath it, as well as the extent and position of itself.

From the evenness of the surrounding country, the rocks beneath are not brought to view, consequently are but little known, except through the aid of an artesian well that was sunk to the depth of 661 feet, upon the Rapids within the city limits, in 1854 ; and other of 473 feet, about three miles down the river, in the vicinity of the quarries, now worked. The records of the two borings, gives great disparity in the uniformity of stratification of the materials penetrated in each. At the first named place, there was no gypsum penetrated after a depth of 178 feet, and the aggregate number of feet penetrated was twenty-five in six different courses ; the thickest of these was seven feet, and the thinest, one foot. From eighty-one to one hundred and eighty feet, the materials penetrated

were clay, lime and gypsum, all of which were strongly impregnated with muriate of soda, which produced a water containing about twenty degrees of this material, and the water in great abundance. The discharge amounting to two hogsheads per minute.

Beneath this and the gypseous strata was found alternations of clay and silicious rocks for about two hundred feet, and the balance uniformly clay—which we must infer is a nearly uniform underlayer of the western border of this Peninsular; since it is said to form the great portion of the Lake-shore between Grand Haven, and Grand Travers Bay's. The gypsum has not been penetrated at any point where it has exceeded twenty feet in an uninterupted layer. It may be said to be imbeded in clay, as this material intercepts and covers it for a distance of about sixty feet. Above this is found the carbonifferous, or mountain lime-stone, of a grayish white color, sometimes tinged with red, from iron, which is disseminated through it in form of pyrotic veins. In this rock are found fossil remains, which, upon comparison with those described by Lyell, in his account of this rock, in connection with the gypsum of Nova Scotia, would show them to be of nearly the same geological age. The only fossils which I have been able to obtain, are corals, bivalve and spiral shells, together with crynoidal joints, and some undetermined imperfect specimens. Of the lamellifferous corals, there are the fenestella and gorgonias, closely allied to specimens of the same form from the Hamilton group of New York. Of other corals, there is the Cyatophyllum dianthus, C——— flexuosum, land Syringopora, (spec. undetermined). Of bivalve molusca, are found the productus semicirticulatus, P——— lobata, spirifers, &c.

These fossils, together with the sparry nodules and geodes, of dogtooth spar, together with the texture and color of the rock, make it compare very closely with the upper carbonifferous lime-stone, below the coal-bearing strata of Davenport, Ia., as laid down by Dr. D. Owen, in his geological report of that state at page ninety-two.

It is but reasonable for us to infer that the gypsum beds of Nova Scotia, New York, Wisconsin, and Michigan, are all of

the same geological age, and occupy about the same relations to other rock and materials in all the places mentioned; so that the description of one is good for the whole, in a general sense.

Grand Rapids, May, 1856.

ARTICLE VI.—*A Practical Treatise on the Art of Making and Preserving Microscopical and other Preparations.* By HENRY GOADBY, M. D., F. L. S., &c.

A quantity of fluid will yet remain outside the top glass, which must be carefully taken up with the camel's hair pencil until the surface of the lower glass, around the top one, be made quite dry, when the following cement must be applied to the clean, dry glasses, to shut in the fluid, and render the preparation permanent:

Take Egyptian asphaltum and dissolve it in turpentine to the consistence of a thick paste; this process is greatly facilitated by the application of moderate heat. Keep it in a well secured vessel, and label it. Then take *japanner's gold-size*, which may be obtained at the varnish makers, but generally it is too thin, because new. Inspissiate it by the continued application of heat, until it acquires the consistence of molasses, then with a muller, upon a marble slab, grind up with the gold size as much lamp-black as you can, until you have formed a *very stiff paste;* this should also be well secured and labelled. The properties of these ingredients are as follows:

Asphaltum is hard and brittle.

Gold size is highly tough and elastic, and retains these properties for many years. By combining elements respectively *too hard*, and *too* soft, the one is made to counteract the objectionable properties of the other, and the lamp-black not only assists to give good consistence to the whole, but is desirable from its indestructibility.

Japanner's gold-size is composed of boiled linseed oil, dry red lead, litharge, copperas, gum animi, and turpentine.

To use the cement, take nearly equal parts of each of the above materials, taking care that the gold-size composition

should rather preponderate over the asphaltum, than the contrary; mix them intimately on a slab, with a small palette knife; if too thick to work well, add a few drops of turpentine, *but beware of making it too thin.* Apply the cement, thus made, with a camel's hair pencil to the outer margin of the top glass; do not use too much for the first coat, but rather by successive layers, applied at different periods, fill with cement the space between the lower and upper glasses of the preparation, until a good solid layer be formed, when the process is complete. It is, however, most important *to isolate the several layers of the "black" cement*, for the turpentine contained in a newly applied coating will act upon, and partially dissolve, the old and dry layer. In this case, the upper surface being exposed to the atmosphere, will speedily *dry* and *contract*, and acting upon the softened cement below the surface, will drive it between the glasses, and spoil the preparation.

Either of the following compositions may be used for the purpose of separating the lavers of the black cement:

Gum arabic,..... .....3 drachms.
Sugar, ...1 do.
Corrosive sublimate,.....1 grain.
Water, sufficient to make a thick mucilage.

Marine glue, dissolved in an excess of whitewood naphtha, to form a thin solution of the glue. This, which is by far the best application for the purpose, dries nearly as rapidly as it can be used.

Having devoted forty years of my life to the dissection of animals by the aid of the microscope, and in the preparation of the elementary tissues of all animals, from man downwards, and being desirous of preserving and making permanent the results of my (frequently) very tedious labor, my wants, in this respect, were necessarily peculiar. The ordinary form of vessel, then (and now) in common use—a bottle—was altogether unsuited to the especial necessity. I could not place a *bottle* under the microscope for the examination of its contents, the aberration, resulting from the figure of the bottle, precluding the possibility of defining with precision, the preparations contained within, neither could I see the preparations without

the microscope. Thus, the work I had been able to accomplish by suitable optical assistance could not be rendered apparent to my friends, by the use of a microscope ; and whether it were an exposition of the nervous system, or other organic structure of an insect, or a minutely injected tissue of a frog, or a man, they were alike inaccessible to unassisted vision; moreover, to increase my difficulties they were required to be kept as *wet* preparations. Having been in the constant habit of dissecting under water, in tin pans of various sizes, and always covering these pans with a plate of glass to keep out dust, &c., when they contained unfinished dissections, or an animal simply prepared for dissection, I was struck with the beautiful appearance of an insect, or other entire animal, lying as natural as possible, with all its full proportions displayed, retaining its characters in their utmost integrity, and so arranged as to be easy of access to the most superficial observer. To my vision, there could not be a more charming sight, than a finished dissection of the nervous system in situ of any insect, especially of the Blatta Americana—one of which I dissected at ten years of age—while lying in the pan in which the dissection had been performed ; and sorely have I grieved at the sadly changed appearance of the same insect, at the instant I placed it in a bottle containing alcoholic fluid, ostensibly *to preserve* it, but actually to complete its disfigurement. Neither could I suspend a delicate preparation in a bottle, in such a manner as to insure its safety. With a quantity of air always contained in the bottle, *the fluid* is put in motion by the act of taking up the vessel to examine its contents, and the particles of fluid beating against a delicate tissue, will inevitably in time, break or displace the structure that had cost the patient labour of many tedious hours to dissect and display. Thus, by my own act, not unfrequently, and by the carelessness of others, I was continually losing my preparations; and this determined me to attempt a form of vessel that should agree, as far as possible in all general particulars, with the pans in which I used then, and still continue to dissect. Believing *glass* to be the very best material for my purpose, I consulted several operative glass-grinders on the subject; who all declared the work I required could not be

done, and that if it could be accomplished, the cost would prove prohibitory. Not to be diverted from my purpose, nor discouraged by the statements of the glass-grinders, I determined to try and work out my plans with my own hands, although I had not received education in any branch of mechanics. Moreover, in connection with my project as a whole, I required a good cement for the glass vessels, and some other preserving fluid than alcohol. These subjects occupied me more or less for twenty years, during which time the failures were frequently quite disheartening, chiefly as regarded the *mechanical* part. On one occasion, I possessed about three dozen of glass vessels, each full of fluid, hermetically sealed, and containing a minute dissection, which had remained permanent for a period of two years. A gas microscope had just been invented, and was then on exhibition in Bond street, London. In an evil hour I submitted my preparations to this instrument; the intense heat of the gases melted my cement, and all my treasured dissections were destroyed before my face—this occurred about eighteen years ago. In the years 1839–40 and 41, I worked most perseveringly at my glass cells, and vessels, with a view, either to complete the plan, or to give it up: at the latter end of 1841 I possessed a large collection of preparations, all of them contained in vessels similar to those I now use, and intend to describe. I submitted them to the inspection of the Society of Arts, who, having invited the assistance of a large number of eminent men, awarded me their large gold medal, inscribed to me, "for his method of putting up anatomical preparations." The medal was awarded in November, 1841, and presented on the distribution day in 1842.* I have felt it necessary, in my own justification, to give this history of a plan of mounting zoological or anatomical preparations, now in very extensive use, as I have been subject to the most impudent plagiarism of modern times; the method is recommended and explained in a recent publica-

* The preparations here alluded to were subsequently purchased from me for £500 sterling, or $2500, by private subscription, headed by H. R. H. Prince Albert, and presented by the subscribers to the Hunterian Collection, in the Royal College of Surgeons, where they now remain.

They were also rewarded by the late Sir Robert Peel, at that time First Lord of the Treasury, who presented me with a check, on the Royal bounty fund, for £150—$750.

tion without giving me the credit of originating and perfecting it.†

There are many objects for the microscope, of great zoological or physiological interest, which possess more substance than will allow of their being treated in the way already described, although their characters can be preserved only as *wet* preparations; for all such, a *cell*, or a glass box, must now be prepared, and the following is the way to proceed.

Firstly, accurately measure the length, breadth, and substance of the preparation to be mounted; select a piece of flat glass, of substance agreeing as nearly as possible with the thickness of the preparation, and with a glazier's diamond, cut off two pieces from one-eighth, to three-sixteenths of an inch wide, and of equal length; these are to form the sides of the cell; the ends must be of the same width, but not so long. Although the cell should *fit* the preparation in regard to *depth* or thickness, a good space should always be allowed around the side and ends, for example: I desire to make a cell for a preparation measuring one inch long, and five-eighths wide, I should make the cell 1 1-2 inches long, and one inch wide, *inside* measure; when finished, the preparation looks better, is more accessible to the microscope, because the sides of the vessel are not in the way, and, what is most important, *there is more room for preserving fluid*, than if the vessel be contracted to the actual size, or thereabouts, of its contents. The *depth* should be exact for two reasons: one, that thereby the object is retained in the center of the cell, being lightly pressed upon by the top and bottom glasses; the other, that there being no greater substance of fluid between the object and the microscope than must needs be, a better definition of the object is obtained.

When glass is cut with a diamond it always leaves a rugged, uneven surface; for example, when broken off, one piece of glass will present a series of projections, which have left corresponding cavities in the piece to which it was attached; when

† Since the above was written, a second edition has been published of the book alluded to, by the author, Mr. J. T. Quekett, who has therein acknowledged my claim as the sole inventor of the plan. This fact, however, was well known to him long before he published anything, as all that he knows about it, *he learned from me personally.*

placed together, they lock into each other and the addition of a thin layer of cement will form a perfect joint.

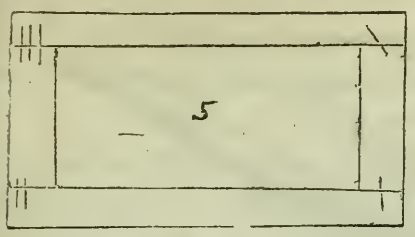

Fig. 1.

I avail myself of this fact in constructing cells of the kind just described, thus: *Fig.* 1 represents a piece of glass of the exact length and breadth, *outside measure*, that the cell is required to be.

The two long pieces, or sides, are first cut, and before breaking them off, they are marked with the scratch diamond so as to include the ends. As the width of the cell is not always sufficient to admit a number of lines, I first make a diagonal mark, then one and two—rarely three, which is unnecessary. I now separate the pieces, discard number five, and take care to cement them to the bottom glass or slide, in the order in which they are marked, and to insure accuracy in this respect, keep the marked surface upward. As it is necessary to have a bottom glass before we can cement the pieces just cut and marked, I proceed to give some

DESCRIPTION OF THE SLIDES.

My peculiar wants have necessitated slides of larger size than that proposed for general adoption by the Microscopical Society of London; moreover, I had a collection of uniform preparations on slides of my sizes, long before that Society had existence. The slide I chiefly use measures, when cut, three inches and three-quarters, by one inch and five-eighths: the glass should be "patent British plate," before referred to, which being ground and polished on both sides is generally very flat: its substance varies from less than one-sixteenth to one-eighth of an inch.

Cutting Board.—To cut the slide expeditiously and uniformly, it is necessary to have a *cutting board*, *Fig.* 2. It consists of a mahogany board eleven inches by nine and one-half, half an inch thick, and rectangular in shape; on one of its long sides, *a*, is fastened by means of pegs, or screws or glue, another piece of mahogany, the *guide board*, *b*, two inches and one-half wide and one-quarter thick; this must be planed so as to

be true, as the front is to form a *straight edge.* By reference to the figure it will be seen that spaces have been cut out of

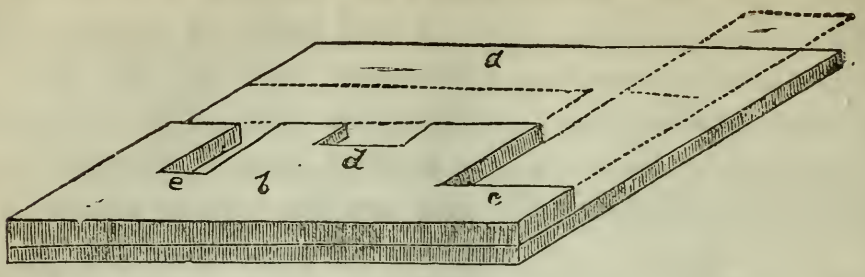

Fig. 2

the guide board, the use of which will presently appear. A flat rule or guage should be made of mahogany, eleven inches long and one-quarter thick, the width to be ascertained as follows: mark out in card-board a pattern of the slide intended to be used, apply the glazier's diamond to a line indicating one side of the pattern and accurately measure the distance between the diamond and the other side, which will give the required width of the guage. In other words, the guage must be the width of the pattern, less *the "rake,"* (or setting) of the diamond. In addition to guages, a *square* is essential; the most useful is of mahogany, one-fourth of an inch thick, with sides six inches and one-half long, and solid, *i. e.*, not open.

The glass intended to be cut into slides should be placed on the cutting board, and if none of its sides have a true edge, a narrow slip must be cut off its entire length, to form one. The straight side of the glass must now be brought against the guide board to ascertain if either of the sides, at right angles to the cut side, be perfectly square with it; if not it is only necessary to square one side: for this purpose place the side to be squared so that it project a little beyond that part of the guide board which is cut away at *c*, apply the square, and cut off a narrow slip in a direction contrary to the former cut: thus the two sides of the glass are made true.

Keep the glass still against the guide board, and removing the square, apply the *guage;* cut the whole length of the glass and you have the width of the slide. Now turn the squared end of the glass just cut, into the space at *c*, pressing it firmly against the angles of the guide board, (which must also be made quite true,) place the guage against the guide board in

its former position, cut the glass transversely, as shewn by the dotted like, and you have the length of the slide ; and in this way cut up the remainder of the slip of glass, as far as it will yield slides of the proper length.

In like manner the spaces *d* and *e*, in the guide board, give the length of other slides, the width of which has been cut previously with other guages adapted to the purpose. By this arrangement of the cutting board, one guage is alone required to cut the width and length of a slide of any given dimensions. From the foregoing description it will be obvious that the guages must be first made, the length of the spaces in the guide board determined by their assistance, and they must be cut in it before it be affixed to the cutting board.

Grinding the Glass.—Unless the slides are to be covered with paper, the sharp, rough edges left by the diamond cut should be removed by *grinding the glass.* This can be accomplished on a perfectly flat stone of sharp grit with water ; the process is greatly facilitated by the addition of emery, but a better tool, in my experience, is a plate of *soft pewter*, or the emery plate.

My pewter plate was formed in a mould made for casting the plates on which to engrave music ; its outside measure, therefore, corresponds to the size of a printed page of music, but it is three-quarters of an inch thick, and weighs fourteen pounds. It is important that the surfaces be quite flat, and every care should be taken to keep them so. *Soft* pewder is desirable because it contains a much greater quantity of lead than the hard, in which tin preponderates. The metal is used only as the vehicle of the cutting material, which is emery. The latter, in time, becomes thoroughly impacted in the metal, so that it will cut with the assitance of water alone, and the wear of the plate is too trifling to be estimated. When in use it should always be charged with "superfine" emery, and water ; coarser tears the glass.

To be Continued.

SPIRIT OF THE MEDICAL PRESS.

On Topical Medication of the Larynx—By JOHN ERICHSEN, ESQ., *Professor of Surgery at University College, and Surgeon to the Hospital.*

The practice of treating chronic disease of the Larynx, by a local application of a strong solution of the nitrate of silver, is by no means of very recent origin. Many years ago, it was employed in this country by Sir C. Bell; and Dr. Watson, in his *Lectures*, speaks of the practice as having been extensively had recourse to by Mr. Vance, who, being a naval surgeon, applied to it the very expressive term of "swabbing." So far back as 1818, M. Trousseau states that "his preceptor," M. Bretonneau, used the saturated solution of the nitrate of silver as a local application in diseases of the larynx, applying it by means of a sponge attached to a piece of whalebone. Of late years this practice has become a very favorite mode of treatment in many diseases of the throat, and in not a few of the lungs, and has been brought very prominently before the profession, chiefly through the writings of Trousseau, in Paris, and of Dr. Horace Green, in New York.

Of the great value of the local application of a strong solution of the nitrate of silver to the throat, in many affections of the larynx, there can be no doubt. Indeed, I believe it to be impossible to bring deeply-seated and very chronic inflammatory or ulcerative affections of this part of the air-passages to an equally satisfactory termination by any other means, or, indeed, to cure the majority of them without this "topical medication;" and the profession is undoubtedly under a debt of gratitude to those practitioners whose names I have mentioned, through whose example and writings the utility of this method of treatment has been demonstrated.

During the last few years, an attempt has been made to treat diseases of the respiratory organs, seated *below the larynx*, by this method; and, by passing a sponge-tipped probang *between and beyond the vocal cords*, to apply a solution of the nitrate of silver, and various other medicaments, to the interior of the trachea, the bronchi, and even into tuberculous cavities of the lungs. In my recent work, *The Science and Art of Surgery*, whilst discussing this subject, I ventured to express my doubts whether this practice, though commonly spoken of and professedly employed, had ever, in reality, been carried out; and I proceeded to state that I had no hesitation in expressing my conviction that the sponge probang had never, in the living subject, been passed *beyond the true vocal cords*, though I believed that with

requisite dexterity it might be got between the lips of the glottis, and the solution freely applied to those parts; and I proceeded to say that, in my opinion, in those cases in which the sponge has been supposed to have been passed beyond and between the true vocal cords, and in which the operator speaks of having felt the constriction exercised by them in its entry and exit, it had not entered the larynx at all, but had passed behind this tube into the œsophagus, the feeling of constriction being produced by its passage beyond the thyroid and cricoid cartilages where they project backwards, and that the caustic solution had been applied, not to the interior of the larynx, except when a few drops accidentally squeezed out by the pressure of the sponge against the lips of the glottis have been inhaled, but to those extensive folds and planes of mucous membrane which invest the base of the epiglottis and the back of the thyroid cartilage, and which, with their subjacent cellular tissue, are usually greatly congested and infiltrated in chronic throat diseases; in fact, that the sponge probang is passed in the way represented in the annexed wood-cut.

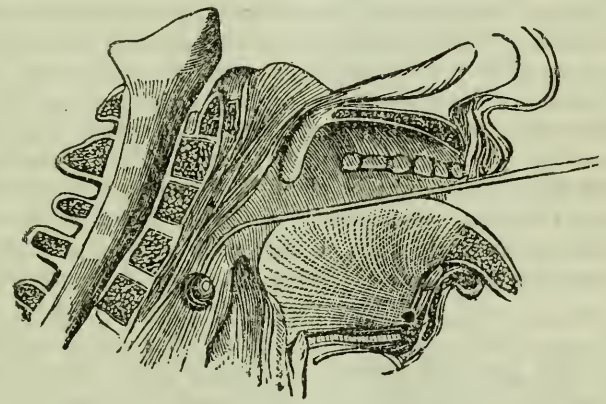

Fig. 1.

Indeed, were it otherwise, and did the sponge really penetrate between and beyond the true vocal cords into the trachea, hitching against these, as it was withdrawn, with a jerk, or a distinct feeling of constriction, this operation would be one of the most dangerous in surgery, the whole safety of the patient depending, not on the dexterity of the surgeon, but upon the integrity of the thread, corroded by nitrate of silver, with which the sponge is attached to the whalebone: did that give way, the sponge, hitching against the vocal cords, must necessarily be detached; and what would the condition of that patient be into the chink of whose larynx half a cubic inch of sponge was impacted, or in whose trachea such a mass, saturated with nitrate of silver, lay loose?

This opinion, to which I still adhere, was deliberately formed and based on experiments on living animals, and on the dead subject, on observations made in cases of cut throat, and on a fair share of practical experience in the treatment of the diseases of the air-passages, not only in ordinary hospital and private practice, but when acting as surgeon to the City of London Hospital for Diseases of the Chest. It has, however, met with much opposition and angry denial; and, for venturing it, I have been assailed in terms which a recent reviewer somewhat blandly designates as "barely civil." This, however, matters little; truth is but poorly advocated by personal attacks, and medical science has never yet been promoted by sneers. My object in this inquiry (which was commenced twelve years ago, and has been continued at intervals since) has not been to contest the opinions of individual practition-

ers, but to investigate the broad question as to the possibility of passing the *sponge probang*, in the living subject, through and below the true vocal cords into the trachea and bronchi. To this point I alone refer, and, in doing so, I wish it to be distinctly understood that I do not in any way impugn the great value of the topical application of a solution of the nitrate of silver to the throat in laryngeal diseases, to which I have already borne ample testimony, and of which I have had abundance of experience. The only question at issue is as to the depth to which the *sponge probang* has been passed, and not as to the advantage attending the application of nitrate of silver in throat diseases.

This question has, during the past year, attracted much attention in America, more particularly in connection with a suggestion made by Dr. H. Green, of treating phthisis by injecting a strong solution of nitrate of silver into the tuberculous cavities, through a tube passed into the lungs through the larynx, trachea, and bronchi. In a paper presented to the New York Academy of Medicine, on this subject, and of which Dr. Green has had the kindness to send me a copy, that gentleman, after alluding in very flattering terms to my published opinions on this subject, proceeds at some length to combat them. The New York Academy of Medicine appointed a committee to gather evidence on this point, and to report thereon; and, through the kindness of Dr. Stone, of New York, a copy of that report, which is of an extremely valuable and interesting character, and to which I shall have occasion presently to refer, has been presented to me. This report confirms the opinion that I had previously expressed, that there was no evidence of the sponge probang ever having been passed through or below the vocal cords; Dr. Green, notwithstanding the special dexterity which he had acquired in the management of this instrument, having in every instance failed to do so.

On inquiring into the evidence on which it is founded, the doctrine of the passage of the sponge probang through and beyond the vocal cords, I have failed to discover that any of a positive character exists, and, so far as I can gather from the writings of its supporters, it would appear that the reasons from which it is inferred to do so may be arranged under the following heads:—

1. The sensations of the patient.
2. The sensations of the surgeon.
3. The analogy offered by the introduction of tubes for the purpose of artificial respiration, and by the inhalation of foreign bodies.

These different conditions we must examine somewhat in detail.

1. *The Sensations of the Patient.*—The exquisite degree of sensibility possessed by the larynx need not be dwelt upon here. Mr. Porter, in his admirable work *On the Surgical Pathology of the Larynx and Trachea*, very justly says: "It (the larynx) is placed as an outwork to protect the important organ of respiration, and rejects vehemently and with spasmodic violence of every substance that can by any possibility prove offensive or injurious." Many years ago, Magendie showed that this was the most sensitive part of the respiratory tube; and in the year 1843, I published in the *Mecical Gazette* a series of experiments which demonstrated the same fact. Since then I have had repeated opportunities of verifying the correctness of these observations in the human subject, in cases of cut throat and aerial fistula, in which, by means of probes introduced through the artificial opening, I have tested the extreme sensibility of the larynx as compared with other parts of the air-passages, and have often observed the spasmodic irritation and great distress suffered by the patient when its mucous membrane is touched from within, and this even though the part is no longer subservient to the purposes of respiration, and the sensation of asphyxia not ex-

perienced, which would otherwise be induced, and which would greatly aggravate the distress.

If a long, bent probe, or a gum-elastic cathether, be passed over the back of the tongue, two classes of sensations will be elicited, according to the part that is touched. If the instrument be directed down the pharynx, and altogether behind the larynx, into the œsophagus, as in the introduction of the stomach-pump tube, the patient will experience some little distress, which is easily quieted. The face will become slightly congested, and the eyes perhaps somewhat suffused, with a disposition to cough, a slight feeling of choking, and some constriction about the chest. All these sensations, however, are transitory. These symptoms may be termed *pharyngeal.*

If, on the other hand, the probe or tube be bent *forwards*, so as to touch the lips of the glottis, and more particularly if an attempt be made to push it on into the larynx, then a widely different train of symptoms will be induced. The patient suffers extreme distress and anxiety; there is great sensation of constriction bout the chest and throat, spasmodic difficulty in breathing, and an inability to speak; the countenance becomes much congested and livid; the eyes protrude and stream with tears; he stands up, gropes wildly with his hands, and is pacified with great difficulty. As the attack goes off, there are deep, sobbing inspirations, and catches in the breathing. These symptoms, which are analogous to those induced by the irritation of the inside of the larynx through an aerial fistula, may be termed *laryngeal.*

The first class of symptoms is produced by the application of an irritant to the mucous membrane of the pharynx; the second, the irritation of the larynx. Their severity will, in a great measure, depend upon the nature of the irritant applied. They will necessarily be far more severe when a sponge soaked in a caustic solution is thrust down the throat, than when a smooth and unirritating gum-elastic tube is passed.

Both these classes of symptoms are commonly met with after the application of the throat probang. When the *pharyngeal* symptoms occur, there can be little doubt that no sponge saturated with a strong solution of nitrate of silver has penetrated into the glottis. But is not the case different when the *laryngeal* symptoms are fully developed? Must these not, when existing in their full intensity, be taken as evidence of the introduction of the sponge probang through the glottis? To this I have no hesitation in answering in the negative. I have repeatedly brought on these symptoms, in the most morbid degree, without the use of a sponge at all, or the introduction of any solid body into the larynx. In fact, if a drop of a strong solution of the nitrate of silver is fairly *inspired* into the larynx, the most intense distress and appearance of impending asphyxia will be induced. I saw this well exemplified, some time since, at the hospital, whilst applying a strong solution of nitrate of silver, by means of lint wrapped round a probe, to a syphilitic ulcer on the soft palate, altogether away from the larynx; a drop was accidentally inhaled, when the patient was suddenly seized with one of the most intense attacks of laryngeal spasm that I have ever seen; for a few moments she appeared to be about to die, asphyxiated, and had all the laryngeal symptoms above described fully marked.

In many cases I am in the habit of applying the solution of the nitrate of silver by means of a strong glass tube, bent nearly at right angles about an inch from one extremity. A few drops of the solution are introduced into the bent end of the tube, and this being passed over the back of the patient's tongue, so as to overhang the glottis, the other end is closed by the pressure of the finger. The patient having previously emptied his chest, is then told to take a deep breath, and, at the moment of doing this, the finger being re-

moved from the tube, the solution contained at its bent end is inhaled fairly into the larynx; and, when so applied, will produce the symptoms already described.

Thus, then, we may conclude that when the *pharyngeal* symptoms exist alone, the sponge cannot have passed into the true air-passages; and that the *laryngeal* symptoms, however intense they may be, afford no evidence of more than the inhalation of a drop or two of the caustic solution into the glottis.

2. *Sensations of the Surgeon.*—The little reliance that can be placed on the mere sense of touch in many explorations of the mucus canal is well known to surgeons. It often happens, for instance, that, in the attempt to relieve retention of urine from enlarged prostate, the catheter is supposed to be lodged in the bladder, when it has only reached the dilated sinus of the urethra: so, also, in passing bougies up the rectum, that the instrument has entered the sigmoid flexure, when, in reality, it has curled back upon itself. Those practitioners, however, who believe in the possibility of passing the sponge probang beyond the vocal cords, rely much on the sensations communicated by its passage through this narrowed portion of the larynx. They say that in passing the instrument to the proper depth, a certain sense of obstruction is felt: against this, which is believed to be the vocal cords, the sponge is firmly pressed for a moment, when the obstacle yields, and the instrument passes onwards into the air-tubes. On the withdrawal of the probang, the same feeling of constriction is experienced by the sponge being drawn up against the cords. These sensations are undoubtedly experienced. I have many times felt them myself, and, had I judged by them alone, could have been almost certain that I had passed the instrument between and below the vocal cords, and this belief would have been strengthened by the circumstance that in many of the instances in which this constriction was felt the *laryngeal* symptoms were manifested. I soon found, however, that this was by no means uniformly the case, but that it not unfrequently happened that the *pharyngeal* symptoms only were induced, and that consequently, in accordance with what I believed to be the proper state of sensibility of the larynx, the interior of that tube could not have been traversed by the caustic sponge. Finding, also, the same sensation often experienced in the introduction of bougies and tubes into the œsophagus and stomach, it was clear that it could have nothing to do with their progress through the larynx, and I was led to conclude that it was occasioned by the passage of the instrument through that narrowed portion of the end of the pharynx, or the beginning of the œsophagus, where the cartilages of the larynx, projecting backwards, give rise to a certain amount of constriction, compressing the gullet, as it were, against the spine. Here the instrument meets with a certain degree of obstruction, which is partly mechanical and partly occasioned by spasm of the constrictors of the pharynx: and, on this being overcome, passes on with a sudden slip, again to meet with a degree of constriction on being withdrawn.

In numerous experiments on the dead body that I have made on this point, I have very frequently found that the instrument had passed into the œsophagus, when, from the sensation it gave, those who had introduced it felt confident that it had entered the air-passages. In fact, the shape of the sponge probang, as it is always sold (see Fig. 1), is such that it cannot be made to enter the larynx and to pass beyond the vocal cords in the dead body, without the employment of a considerable degree of force, and by means of those manipulations which are alone admissible in the living patient. A probang, with a short curve, such as those that are uniformly employed, has a natural tendency to take the direct passage, as it were, down the œsophagus, instead of turning forwards to enter the larynx. When the curve is much increased,

as in an ordinary catheter, the sponge may, during life, be passed between the lips of the glottis, but it cannot even then be made to pass between and below the vocal cords, in consequence of the curve being too large to be admitted into the diameter of the trachea. The evidence of the New York Academy commission fully warrants this statement, for the reporters remark that, notwithstanding the most persevering efforts with the whalebone slightly bent, as used by Dr. Green, and with patients who quietly submitted to the test of experiment, the results were entirely negative. In no instance did it enter the trachea. In two instances, with the whalebone *curled like a common catheter*, the sponge was thought to have entered the larynx, but, with repeated attempts, it could not be forced between the vocal cords, and the suffocation was so great that it was necessary to withdraw the instrument.

If a small curved probang, of the ordinary shape, be made to enter the larynx of a dead subject, by raising the handle well against the upper teeth, and pressing the sponge forcibly forwards between and under the tongue, and then be pushed down between and beyond the vocal cords, it will be found that the sponge scrapes along the anterior wall of the trachea, and that the handle of the instrument is thrown into the extraordinary curves represented in Fig. 2. That inflamed and irritable air-passages would benefit under treatmens such as this, seems scarcely probable.

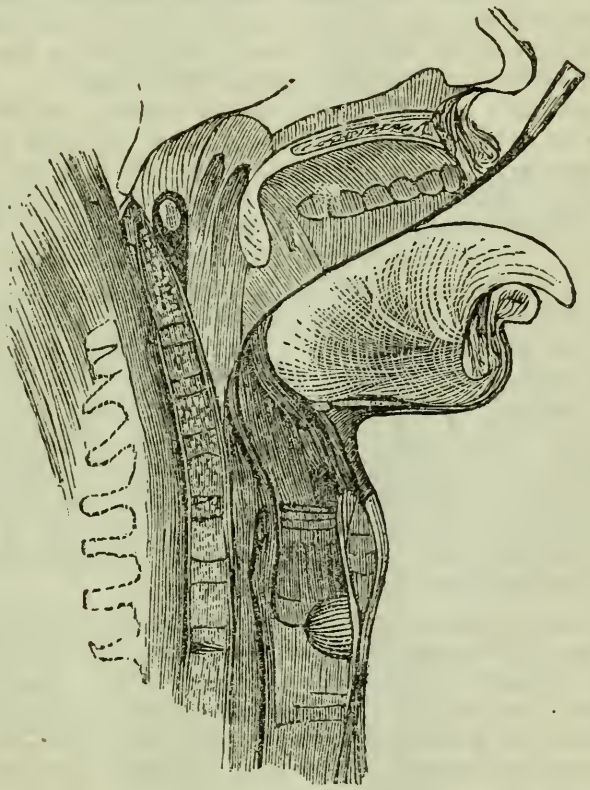

Fig. 2.

The fallacy of the sensations of the surgeon is well illnstrated in the following extract from the report of the commission of the New York Academy :—"We witnessed in cases 11 and 21 the fallacy of Dr. Green's opinion as to the success of his experiment, though based on so large an experience. In both instances, whilst positive that he had successfully passed the instrument (an elastic tube) into the trachea, *the patient vomited through the tube*, and thus demonstrated his error."

From these observations, then, I would conclude that the sensations of the surgeon afford no reliable evidence as to the course taken by the instrument.

3. In asserting that the sponge probang can be passed into the air-passages, much reliance has been placed on the analogy afforded by the introduction of tubes for the purpose of artificial respiration, and in the occasional inhalation of foreign bodies. Does any such analogy really exist? I think not. It seems to me that so very different a degree of irritation would be set up by the introduction of a smooth, well-oiled tube, of small calibre, through which the patient can breathe, and from which consequently there is no risk of suffocation, and the passage of a caustic sponge, which not only would stimulate the part violently, but would necessarily induce temporary asphyxia by blocking up mechanically the air-passage, that no analogy can be drawn from the one case to the other. To do so seems about as reasonable as to infer that because a gum-elastic or silver catheter may be passed along the urethra, therefore a whalebone rod, tipped with a sponge soaked in a caustic liquid, might also be introduced into the bladder.

With regard to the introduction of foreign bodies into the larynx, it appears to me that there is no analogy whatever between this accident and the passage of the caustic sponge. In the one case the parts are taken by surprise, the foreign body being accidently sucked into the chest by a rush of air, during inspiration, through an open glottis; in the other case the patient is prepared for what is about to take place, involuntarily and instinctively resists, and, holding his breadth, keeps the glottis closed.

But, setting aside this question of analogy, which is of little moment, is the introduction of tubes, even into the larynx, so very easy and simple and certain a procedure as some writers seem to suppose it to be? On the dead body, undoubtedly, nothing is easier than to pass a catheter into the larynx, and down into either bronchus; but is it so in the living? That excellent surgeon, Mr. Porter, of Dublin, when speaking of the introduction of Desault's tubes through the rima glottidis, in cases of cut throat, says: "Awkward and reiterated attempts produce inconceivable distress, and, even when performed with the utmost dexterity, it must unavoidably excite cough and restlessness" (p. 225) And again: "Every time the instrument touches the larynx the patient becomes anxious and restless; he tosses himself about, and coughs convulsively; and each motion, whilst it increases his own distress, renders the performance of the operation more difficult. Can such a patient endure the irritation that a few moments' unsuccessful poking at the rima glottidis will inevitably occasion?" (pp. 256–7.) The truth of these remarks must be acquiesced in by every surgeon who has ever attempted the operation there described.

On this point the evidence of the New York Academy commission is peculiarly valuable. That commission, in its inquiry, employed two tubes, the size of a No 10 catheter; one, selected by Dr. Green, was slightly bent at its extremity, and was one of the kind employed by him in his practice. The other consisted of a catheter with a wire stilette, bent with a curve, the segment of a circle six inches in diameter. This tube does not appear to be used in practice, but was employed for the purpose of comparison. The result of the experiments with these tubes was, that Dr. Green (who was the only one that employed it) failed in passing the tube with the *small* curve in thirty-five out of thirty-eight trials, or in about ninety-two per cent. of the cases; and that the tube with the *large* curve was passed in eight cases out of thirteen; whilst the sponge probang failed in every case (eighteen) in which it was tried.

"From these experiments it would appear that the instrument best adap-

ted to succeed in catheterism of the air-passages is the tube having a large curve; whilst that least adapted to enter the trachea is the sponge probang."

In the course of these experiments, a point of much interest was elicited by the commission, viz: that a patient might blow out a lighted candle, or collapse and inflate a bladder attached to its free extremity, through the tube, even though it had never entered the trachea, but had been purposely passed into the œsophagus.

On this third point, then, I think we are warranted in the conclusion that there is not sufficient analogy between the introduction of the sponge probang and that of a catheter tube into the larynx, to lead us to suppose the passage of the former instrument possible because that of the latter is occasionally practicable; and that the introduction even of a tube of the same shape as the sponge probang is an operation of extreme difficulty, failing in far the greater portion of cases in which it has been attempted; and that the introduction of foreign bodies into the larynx is effected under totally different conditions to that in which the sponge is attempted to be passed.

Finally, I think that we are fully justified in adopting the conclusion of the commission of the New York Academy, that there is no reliable evidence that the sponge probang has ever been passed through and beyond the vocal cords.—*Lancet, Nov.* 24 *and Dec.* 1, 1855.

The Sale of Patent Medicines a Violation of Law—Important Communication from the Clerk of the District Court of the Northern District of New York.

The following correspondence, which we now for the first time make public, clearly establishes the fact, that the traffic in patent medicines, one of the greatest curses from which the community suffers, by the imposition of empirics, is done under the most shallow pretence of legality. It has always been a mystery to us how honest men could be so heedless of public good, as to legalize the indiscriminate sale of such dangerous compounds as many of these nostrums are; but we here have explained the whole secret. As might have been anticipated, from the character of the men engaged in their manufacture, the sale of these drugs is effected fraudulently.

We trust some measure will be taken to put a stop to the sale of these vile compounds, and bring to justice the violators of law, who poison public health and grow rich thereby. As these nostrums are not truly patented, the secret of their preparation being studiously withheld in defiance of the explicit declaration of our Patent Laws, we would suggest the passage of a law imposing a heavy penalty for the sale of "patented" medicines, when in fact they are not patented. and allow half the fine recovered to the informer. It would be a truly philanthropic effort, worthy a Howard, or a Mrs. Fry, to secure the community from this terrible infliction of the sale and use of "patent" medicines.

We cannnot sufficiently express our admiration of Mr. Conkling's integrity and enlightened discharge of his official duties. For several years he has uniformly refused to grant these applications to patent labels, from a conscientious belief in the illegality of such proceedings, and a conviction of the worthless character of such compounds. During this time he has not only sacraficed the income which is due from such grants, but incurred

the odium and bitter hatred of this miserable class of impositors. In behalf of the medical profession we tender our acknowledgments for the service he has thus rendered directly to the community at large, and indirectly to legitimate medicine.

From the annexed "circular," it will be seen that Mr. Conkling's views of the Patent Laws, are indorsed by the State Department, and instructions in conformity therewith have been promptly issued by Mr. Secratary Marcy.—*Eds. New York Journal of Medicine.*

BUFFALO, March, 1856.

DEAR SIR:—Will you do me the personal favor to furnish me with a written statement of your views on the subject of copyrights for labels, etc., as expressed to me in a conversation yesterday.

Coming from a gentleman of your rank and position, I am certain that they would possess interest; and I would like to give them publicity through some of our Medical Journals.

Sincerely wishing that the public had many more such faithful servants.

I remain yours truly,

AURELIAN CONKLING, Esq. FRANK H. HAMILTON.

CLERK'S OFFICE, *Dist. Court of the U. S., for the Northern District of New York.*

BUFFALO, March 18, 1856.

DEAR SIR:—I am much obliged for the interest maifested by you in the subject with which I lately troubled you; and although it is probable that in your politeness you over-estimate the importance of the views expressed to you, and of those contained in my letter to the Hon. S. G. Haven, still it is possible that they may be useful to others, and I therefore proceed to repeat them here, for such use as you may deem expedient. I am much pleased with the polite interest you manifest in the subject under consideration, because, I regret to say, I have heretofore experienced very different treatment from some persons who have found their way into your profession, and who not only so far forgot their professional obligations, as to manufacture nostrums, but who are also guilty of low abuse of an officer whose sense of duty would not admit of his being made instrumental, improperly, in imposing their mixtures upon the public.

The immediate purpose of my letter to our representative in Congress, was to invoke the attention of the Department of State to what it seems to me is a great abuse and perversion of the provisions of law in relation to *copyrights*. The subject of copyrights is under the general supervision and control of the State Department of the United States; and officers who have subordinate duties to perform must, to some extent, be subject to directions and instructions from that department. Applications are frequently made to me, to record, under the provisions of law above alluded to, labels of medicines, compounds, and mixtures, of different grades of pretension, from an "elixir of life," or a "diarrhœa cordial," to a hair-dye or a corn-salve.

Upon the occurrence of the first application of this sort, a number of years ago, being asked my reasons for refusing to treat the subject as one embraced in the provisions of the Act, entitled "An act to amend the several Acts respecting copyrights," I made the following reply, a recital, in part of which, will express the views which have ever since goverend me, upon the subject.

"I am sorry that my views of the Act of Congress, above mentioned, are such as to interfere with your interest or wishes. It is not the province of Clerk of the District Court to 'grant' anything. His duties are ministerial and upon the subject of copyrights he is bound to do what he is directed to do, by the Act of Congress.

If I should record the *label* sent by you, and should send you a certificate of the fact, I would thereby 'grant' you nothing, nor would you gain anything, unless the Act of Congress embraces such a subject.

I have examined, with considerable care, the Act of Congress above mentioned, and I will state some of my views upon it; from which you will infer that I do not think proper to record a *label* under that Act.

My opinion is, that the 'map, chart, musical composition, print, cut, or engraving,' must have a value as such, and be intended for sale as such; that whichever it may be, print, cut, or engraving, *it* must have a *title* applicable to itself, which title is to be recorded.

I am also of opinion, that the Act of Congress was designed to promote the acquisition and diffusion of knowledge, and to encourage the p oduction and publication of works of art, the general purpose being to advance the people in civilization and refinement.

I think, furthermore, that, by the Act to which I have referred. Congress did not intend to prevent the imitations of the stamps and labels of any manufactured article, or goods, or merchandize. That is a subject of such extensive interest and importance, that, if it had been the intention of Congress, to embrace it in the provisions of the law, that intention would have been distinctly and unequivocally manifested. It is not likely, however, that such a provision by Congress will ever be found so much out of place, as it would be in 'An Act to amend the several Acts respecting *copyrights*.'

Furthermore, I am quite certain that Congress did not intend that this Act should be so prostituted as to be made instrumental in deluding the ignorant and inconsiderate, into the purchase and use of the various nostrums, catholicons, and panaceas, which are so much worse than useless to the community."

It is the practice, I am informed, in many of the Judicial Districts, to make records of such labels as are above mentioned, and I suppose it is done to avoid the trouble and ill-will engendered by a refusal. It is entirely clear, however, that such a practice is not in accordance with the intention and design of the Act of Congress above mentioned; and I have no doubt that if the mischiefs of the practice were realized, it would be discontinued.

The course of proceeding above mentioned, is that by which almost the whole number of the miscalled "patent medicines" are brought forth. It would seem to be unnecessary to state, that, there is no force or validity whatever in this proceeding, for such pretended purpose.

There are means provided in the Patent Laws, for securing to any individual the exclusive right to "any new and useful art, machine, manufacture, or composition of matter, or any new and usefnl improvement on any art, machine, manufacture, or composition of matter," which he may invent; and the necessary requirements in order to accomplish the purposes are clearly and definitely prescribed, as follows:—"But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable a person skilled in the art or science to which it pertains, or with which it is most nearly connected, to make, construct, and use the same."

The Act also provides that the inventor shall accompany his application "with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where invention or discovery is of composition of matter." The Act also provides, that the Applicant shall make oath, that he does not know or believe that the composition of matter was ever before known or used. These and the other requirements of the law being complied with, provision is made for a critical examination into the merits and character of the alleged invention; and "if the commissioners shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent therefor." This, it will be perceived, is a different course of procedure from that of filing a label, not even indicative of the character of the compound it is to cover. The law, it will be perceived, provides for a truthful statement of the ingredients and proportions of every patented compound. The purposes and effect of the provision are two-fold. In the first place, the means are afforded for an intelligent and careful examination into the compound, in order to determine whether it is worthy of the countenance of the government; and, secondly, after the termination of the duration of the privileges, secured by the letters patent, the necessary knowledge is at hand, to make the invention directly available to the public, by furnishing to all, a knowledge of its ingredients and mode of preparation Moreover, the "letters-patent" themselves, in accordance with their true purport, contain a plain statement of these particulars. There is something *open* in these requirements, and in the whole course of proceeding marked out in relation to patents, and the fact is, just as one would suppose, that there are really very few "patent medicines." These medicines sold as such, are, nearly all of them, utterly destitute of any real basis for the pretense under which they are imposed upon the public.

If the practice of recording labels of medicines shall be discontinued, in the clerk's offices, one important step will be taken towards clearing away the delusion which prevails upon the subject. And if your profession, with that true regard for the general public good which characterizes its *worthy* members, will take the subject in hand, I have no doubt that you can obtain the enactment of penalties against the sale of any medicines under the pretense that they are, when in truth, they are not, patent medicines. There has been legislation to prevent the adulteration of medicines; but, it seems to me, that it is a more important end to shield the people against the miserable mixtures, which, as things are now managed, are, by the apparent encouragement of the government, imposed upon them. I regret, Dear Sir, that this letter has necessarily been so hasty; I do not mean, however, to intimate that its positions are not deliberately taken.

Very respectfully,
Your obedient servant,
AURELIAN CONKLING.

DR. FRANK H. HAMILTON.

CIRCULAR.

DEPARTMENT OF STATE,
WASHINGTON, April 11, 1856.

Mr. .....,

Clerk of the District Court of the United States.

SIR:—The Act of Congress approved February 3, 1831, entitled "An Act to amend the several Acts respecting copy-rights," is "An Act for the *encouragement* of *learning*, by securing the copies of maps, charts, and books,

etc.. to the authors and proprietors of such copies;" and inasmuch as mere *labels* are not comprehended within the meaning of said Act, you will, for the future, refuse, in all cases, to record or issue a certificate for the same under said Act.

I am, Sir, very respectfully,
Your obedient servant,
W. L. MARCY.

A Test for Strychnine. By MARSHALL HALL, M. D.

The detection of strychnia as a poison, is, at this moment, of deep public interest.

When the *chemical* test fails, there remains, I think, another—the *physiclogical.* Having long studied the effects of strychnia on the animal economy, (I have sent two papers on this subject to the institute of France,*) I am persuaded that these effects, on the *most excitable* of the animal species, are at once the most delicate and specific tests of this poison.

I have just performed two experiments, and only two, for want of materials for more.

I requested Mr. Lloyd Bullock, of Hanover street, to dissolve one part of the strychnia in one thousand parts of distilled water, adding a drop or two of ascetic acid.

I then took a frog, and having added to one ounce of water one-hundredth part of a grain of acetate of strychnia, placed the frog in this dilute solution No effect having been produced, one-hundredth of a grain of the acetate was carefully added. This having produced no effect, in another hour one-hundredth of a grain of the acetate was again added, making the 3-100ths, or about the thirty-third part of a grain. In a few minutes, the frog became violently tetanic, and though taken out and washed, died in the course of the night

I thus detected, in the most indubitable manner, one-third part of a grain of the acetate of strynchia. It appeared to me that had more time been given to the experiment, a much minuter quantity would be detectible.

I placed the second† frog in one ounce of distilled water, to which I had added the 1-200th part of a grain of the acetate of strychnia. At the end of the first, the second, and the third hours, other similar additions were made, no symptoms of strychnism having appeared. At the end of the fifth hour, the frog having been exposed to the one-fiftieth part of a grain of the acetate of the strychnia, tetanus came on, and under the same circumstances of removal and washing, as in the former experiment, proved fatal in its turn.

I thus detected one-fiftieth part of a grain of the poisonous salt by phenomena too vivid to admit of a moment's doubt, the animal on, the slightest touch, became seized with the most rigid general spasmodic, or rather, tetanoid rigidity. And this phenomena, alternating with perfect relaxation, was repeated again and again.

As the nerve and muscles of the frog's leg, properly prepared, have been very aptly designated as galvanoscopic, so the whole frog, properly employed, becomes strychnoscopic.

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* See the *Comptes Rendus* for June, 1847, and February, 1833.

† These frogs were not fresh from the pools.

In cases of suspected poison from strychnia, the contents of the stomach and intestines, and the contents of the heart, bloodvessels, &c., must be severally and carefully evaporated, and made to act on lively frogs just taken from the ponds or mud. I need scarcely say, that taken in winter, the frog will prove more strychnoscopic than in summer, in the early morning than in the evening.

The *best* mode of performing the experiment also remains to be discovered with all its details and precautions; an inquiry into which I propose to enter shortly. Meantime this note may not be without its utility.

Prince Street, Hanover-square, January, 1856.

Postscript.—I have repeated my experiment: I placed one frog, fresh from the pools, in an ounce of water, containing the one-fiftieth part of a grain of the acetate of strychnia; a second in the same quantity of water, containing the 1-66th, a third containing 1-100th, and a fourth containing 1-200th. All became tetanic in two or three hours, except the third, which was a *female*, (the others being males,) which required a longer time

The 1-200th part of a grain of the acetate of strychnia is therefore detectible by means of this test conferred by physiology.

We now placed a male frog in 1-400th part of a grain of the acetate of strychnia, dissolved in six drachms of water. In three hours and a half it became violently tetanic.

The fresh frog is, therefore, at this season, strychnoscopic of 1-400th part of a grain of the acetate of strychnia, and probably to a much minuter quantity, which ulterior experiment must show.

In two other experiments of 1-500th and 1-1000th of a grain of the acetate of strychnia were detected.

January 7th, 1856.

☞ The will of the late Dr. John C. Warren, of Boston, provided for the disposition of his body with an especial reference to the science which he had so long pursued and adorned. The will required that the body should remain 24 hours, at the close of which time arsenic should be infused into the veins; at the end of the next 24 hours the funeral ceremonies should take place, and the body be deposited beneath St. Paul's Church; and 24 hours thereafter was to be given, for examination, to the officers of the Medical College and the Physicians of the Massachusetts General Hospital, to ascertain regarding certain peculiarities which he supposed to exist. After this the flesh was to be taken from the bones, the bones macerated, wired, and deposited in the College Museum. The will, we understand, is peremptory. —*American Medical Gazette.*

Extraordinary Length of the Funis.—Mr. John Rouse records (*Lancet,* Sept 1st, 1855,) a case in which the Funis was fifty-one inches long, and was coiled six times around the neck of the child, and once around the left thigh.

REPORTS OF LOCAL DISEASES.

Diseases of Kalamazoo from March 20 to April 20.

Remittant.	Metritis.	Intermittent.
Stomatitis Materna.	Pericarditis.	Meningitis.
Herpes Labialis.	Pneumonia.	Urticaria.
Pleuritis.	Impetigo.	Rheumatism.
Phthisis.	Tonsillitis.	Neuralgia.
Haemorrhoids.		

From April 20 to May 20.

Pneumonia.	Hepatitis.	Rheumatism.
Dyspepsia.	Remittent.	Epilepsy.
Intermittent.	Duodenites.	Conjunctivitis.
Urticaria.	Herpes.	Ovaralgia.
Cereb Spin-Meningitis.	Rubeola.	Dysentery.

Agues and remittents have been very generally prevalent, readily controlled, but apt to return on the seventh, fourteenth, twenty-first or twenty-eighth day. The remarkable regularity in this respect has suggested the precaution of anticipating the recurrence by moderate doses of Quina, &c., during the twelve hours previous to the expected attack. My experience is opposed to the continuous use of Quina during the intervals. It is a singular medicine; its great defect is, that continuance spoils its antiperiodic energy. I liken it rather to musk, assafœtida and valerian than to the so-called permanent tonics. There is no danger of its "staying in the bones"—it is eliminated *too* rapidly from the system.

Opium, Strychnia and Arsenious acid have been found valuable as antiperiodics, about in the order here written. A dilute solution of strychnia in elix. vitriol, with aromatic spirit, (*e. g.*

Sp. Lavand. Comp.) makes an exceedingly effectual ague preventative, in many cases. A host of things will "stop the ague"—but to keep it stopped—*hoc opus.* There is very little utility in denuding the intestines, with this object in view. *Varietas Medicamentorum ignorantiae filia*—a few well-aimed rifles are worth a score of *scattering* muskets.

A feature of the last two months has been the exacerbation of chronic cutaneous diseases.

Urticaria and Herpes are well known as frequent substitutes or attendants of remittent and intermittent. They have thriven luxuriantly upon the "chills and fever" habitation, and many a hasty summons to see erysipelas has been the effect. Like most cases of so-called complication, they need little or no treatment, except that directed to the endemic disease.

Rubeola of a mild character has prevailed considerably during the last two weeks. I have seen no cases requiring treatment beyond the nurse's regimen.

A few cases of dysentery may be noticed. Though clearly sporadic, they have been quite severe.

Although our variety of diseases has been increased, there has been no fatality attending them.

We quote Kalamazoo as one of those places where frequent mild attacks of sickness may occur, but where few die except from old age.

We have few bad cases, except those made such by tampering with such vile compounds as Rhodes', Christie's, Conger's, *et id genus omne.* Truly yours, J. Adams Allen.

Diseases of Port Huron and Vicinity, during the Month of March.

Messrs. Editors:—In accordance with a suggestion made by you to the St. Clair Medical Society, your present correspondent was appointed a committee to report to you, on the subject proposed.

Although unable to make a complete report for the County, for want of the necessary aid and cöoperation of all the Physi-

cians, I send you such data as, with the assistance of one or two of my coadjutors, I have been able to collect, believing it to be a fair exposition of the classes and preponderance of diseases in this locality. I understand this to be the object of such reports, and it may, therefore, answer the purpose designed.

In arranging the accompanying report, I have placed the diseases in the order of their most frequent occurrence.

Pertusis,	Goitre,	Clonic Spasm,
Intermittent Fever,	Constipation,	Bronchitis Acute,
Influenza,	Thecal Abscess,	do Chronic,
Remittent Fever,	Syphilis,	Stomatis Chronic,
Infantile Remittent,	Catarrhus Vesicus,	Obstipation of Bowels,
Dysmenorrhœa,	Acute Hydrocephalus,	Asthmatic Neuralgia,
Frost-bite,	Carbuncle,	Psoriasis,
Amenorrhœa,	Hemorrhoids,	Icterus,
Acute Rheumatism,	Enlarged Bursæ, elbow	Tabes Mesenterica,
Stomatatis Materna,	do do knee,	Strumous Dyspepsia,
Tonsilitis,	Impetigo,	Indigestion,
Hysteritis,	Laryngitis,	Phthisis,

Pertussis prevailed epidemically, while Intermittents and and Remittents are the prevailing diseases of the climate.

Yours truly,

C. M. Stockwell.

Port Huron, April 23, 1856.

Reports of Local Diseases.—Our readers will probably all admit that valuable practical deductions may be gathered from monthly or bi-monthly reports of prevailing diseases, occuring in various localities ; but in order to make the most of these reports, we desire to get more of detail respecting the *treatment adopted.*

Close observation will often detect phases, or modifications in the character of diseases, peculiar to certain districts, dependant upon local causes and amenable to a special treatment.

We are well aware that the great mass of physicians in active business, find it exceedingly difficult to perform the task of making a full report of individual cases, giving a complete history, diagnosis, prognosis and treat-

ment ; but it would require only a few moments each day to make a brief note of cases treated on that day, and at the end of the month furnish us with many items worth recording.

We have received several reports, (too late for our present number,) giving us only a list of diseases, very much like those found in the index of our Text Books. We thank the authors even for these, inasmuch as they with the accompanying letters, evince a disposition to co-operate with us, and promise more for the future.

We have opened this department of our Journal more as the receptacle of a little familiar talk, free from the restraint of a formal didactic discussion of certain theories.

The zeal of the church is maintained and promoted by *conference*,—the legal profession depend largely upon their law *reports*,—and our own profession can find no more active working element of progress, than in the faithful *record of experience*.

We shall present a bi-monthly report of the diseases of Detroit and vicinity, in our next number, in place of our usual monthly report for May.

NEW PUBLICATIONS.

A Manual of the Practice of Medicine—By GEORGE HILARIO BARLOW, M. A. and M. D., Cantab. Fellow of the College of Royal Physicians; Physician to Guy's Hospital ; to the Magdalen Hospital, and to the Philanthropic Society—with additions by D. FRANCIS CONDIE, M. D., Fellow of the College of Physicians, author of "A Practical Treatise on the Diseases of Children," etc. Philadelphia—Blanchard & Lea, 1856.

The very enterprising publishers have, by their kind consideration, imposed upon us the pleasing duty of expressing, through the columns of the *Independent*, our judgment of the treatise whose unassuming title is thus explicitly stated. The volume is a handsome one, of more than six hundred pages; the paper fine, smooth and substantial; the type of fair size, and the impression clear and distinct, while the binding is neat, and of durable material.

Viewed as a whole, in reference to style of execution, we are happy to say it illustrates the truth that the art of book-making, in our country, seems to have approximated perfection, if not absolutely to have attained it. This has reference, however, to the book, as a work of art. It is to be viewed in

another and more important aspect. The great utility of associating practice with *principles* in *medicine*, or of basing *practice* on *principles*. and the necessity of such association has long been felt by all, whose attainments have been such as to qualify them to appreciate and judge accurately on the subject. Hence the change so manifest in systematic treatises and in the modes of teaching medical science within the past few years. We think the work before us will accomplish much towards the consummation of the object so earnestly sought. The *author* does not, indeed, claim to be a pioneer in the important enterprise before him, nor does our distinguished countryman, the accomplished American editor, claim it for him. On the contrary, he makes honorable mention, in his preface, of distinguished laborers, whose teachings in the same direction have done much towards removing the rubbish and debris of former ages, and to fix our science on a rational and substantial basis. To have been an industrious co-worker with these, and others, whom he might have mentioned—many of our own country—seems to have satisfied his loftiest ambition. In the language of the American editor, "we know, truly, of no work better adapted for the use of students and young practitioners, and for occasional (we would say, frequent,) reference by those more advanced in the profession." The style of composition is easy, neat and explicit; the language definite and appropriate, the principles coincidently related and the deductions, as it strikes us, such as are in accordance with the latest and most enlightened views, in pathology. But the practical portions of the work will merit special attention and close study, both from the student and the practitioner. They are particularly excellent, as well for their clearness and precision, as for their conformity to a correct therapeutics. It gives us great pleasure to recommend the work to our class, and heartily to advise them to possess themselves of it at their earliest convenience. We bespeak for it, of our brethren generally, a place on their shelves, not merely to accumulate dust, but as a daily companion and adviser—a treasury, whence to draw such doctrines and principles as will quicken their perceptions and call forth their energies, and enable the inexperienced to contend with disease with clearer vision, and more definite knowledge. It only remains for us to express the hope that the publishers may reap a harvest, not of wordy praise, merely, but of "*material aid*," equal to the extent and ardor of their ambition.

To be had at Raymond & Selleck's, Jefferson Avenue. K.

A Manual of Clinical Medicine and Physical Diagnosis—By *T. H. Tanner*, *M. D*, Licentiate of the Royal College of Physicans. Physician to the Hospital for Women, etc., etc., to which is added the Code of Ethics of the American Medical Association.

Such is the title of a work not long since issued from the prolific press of Messrs, Blanchard & Lea, of Philadelphia, a work of such rare merit as to deserve no ordinary commendation.

There are nooks and corners in Medical Literature, which, though occa-

sionally or incidentally entered, and, at times, explored, at some length, have yet, to a great extent, escaped that strict methodical examination that is essential, both to intelligent practice and to the complete cultivation of the domain of *Professional Science.* Some of these, the author of the above treatise has sought to present to the medical public, in such connection, and with such a degree of explicitness, as to enable the practitioner, and more especially the younger and less experienced, to comprehend, at a glance, the scope and bearing of all such matters, as may belong, respectively, to each. A portion of them may be enumerated as follows, viz.—The faculty of observation in the clinical study of disease, the general conduct of the medical practitioner, clinical examination in general; also, special clinical examination, as, of children, the insane, etc.,—the appropriate mode of taking notes of cases, and definite instructions, in regard to examinations post mortem. These, with other topics no less important and necessary to be understood by all, are not to be found, save incidentally, in the systematic works that most commonly occupy the shelves of the practitioner.

The definition and description of various instruments and appliances to be made available in the clinical investigation of disease, and the proper mode of using them, as, also, such as are necessary for local applications to particular diseased structures and organs, constitute another striking feature of the work before us. Here the practitioner will find accurate instructions for the use of such instruments, among many others, as are required for the treatment of the diseases of the larynx and pharynx according to the enlightened therapeutics of the age; as well as for such as, intelligent treatment of the important, and often perplexing diseases of the vagina and uterus demand. It is not, however, in these particulars, merely, that the Manual of Dr. Tanner will be found of immense value to the practitioner of medicine. The doctrines, in regard to the intrinsic nature of disease, though brief, are explicit, and accord with the accepted principles of modern pathology. Herein, the student, no less than the man of toil in the detail of laborious practice, will find a treasure of select doctrines so arranged and presented as, (though all that may be requisite to an ample elucidation of important questions, that may offer for consideration, be not imparted,) at least, to direct the mind of the investigator to the instructive pages of rarer and more comprehensive works. But it is to that department of the book that treats, more particularly of *physical* diagnosis, including the termination of diseases and the circumstances, that modify them, that we would especially call the attention of the profession, as furnishing data which will lead, with due consideration of such characteristics as are external and obvious to just conclusions, in regard to the real pathology of the case presented for investigation and treatment. This is an unbounded field hedged in, but too often, with difficulties of the gravest kind, and, to the cultivation of which, the best minds have long devoted their energies. In it, much truly, has been accomplished, but the rich fruits, the offspring of its culture, have, we believe, until now, been scattered throughout

its ample domain. Here, then, manifestly, was a void in *medical literature*,—a hiatus that called loudly for a genial spirit, by persevering industry, to supply, and, we believe, we are not transcending the limits of verity, when we aver that the writer of this *manual* has accomplished his purpose with singular success.

There is another department, however, to wit,—the code of ethics of the American Medical Association—which is deserving of special regard. Medical Ethics, we are sorry to conclude, are quite too often overlooked or but imperfectly understood by those even who should be both wise and honest, and who, but too frequently, are ultra pharisaical. As a means, therefore, of diffusing more widely and impressing more emphatically the doctrines of *professional ethics*, and the rules of *professional etiquette*, we hail the manual of Clinical Medicine as a harbinger of "peace and good will" among the members of our time-honored profession. Of the book, as illustrative of artistic skill, it is unnecessary to speak. That it issued from the press of Messrs. Blanchard & Lea, is sufficient commendation in this particular. It remains for us, therefore, only to express the hope that, as the work is abroad on its errand of good, both the *author* and the enterprising publishers may have the satisfaction of knowing, in due time, that its mission and its triumph are complete.

The above work may be found at Messrs. Raymond & Selleck's, in this City. K.

A New Journal.—We have received the first number of the *Louisville Review*, a bi-Monthly Journal of practical Medicine and Surgery, Edited by S. D. Gross, M. D., Professor of Surgery in the University of Louisville, and T. G Richardson, M. D., Demonstrator of Anatomy in the same Institution.

If any single fact or thing, more than any other, indicates the activity and intensity of the American mind, it is, in our judgment, the vast amount of periodical literature at this time, issued by the American Press. The fact is, a significant augury of the success of literature in general, and the final triumph of *American Literature* in particular, as well as the rapidly increasing intelligence of the people; nor is it less significant of the advancement of taste and refinement.

Progression in literature may be accepted as evidence of progress in all the arts of civilized life, but in no department are mental activity, and intensity, more manifest than in that of legitimate medicine. This postulate will be readily conceded when it is contemplated that new Journals, all, to a greater or less extent, evincing a profound acquaintance with the various recondite branches of Medical Science, are succeeding each other in rapid succession. Among those, whose advent we hail as a worthy co-operator in the great work of promoting medical progress and advancing medical reform, we know of none more entitled to confidence than the *Louisville Review*. The Editors will please accept our thanks for the favor they have conferred upon us in adding this welcome periodical to our list of exchanges. K.

Books Received.—We are happy to announce the receipt of the following works from the publishers, viz. :

Budd, on the organic diseases and functional disorders of the stomach; Henry G. Wright, M. D., on head-aches, their causes and their cure ; a disquisition on the ancient history of medicine, comprising critical notices of the origin of medical science, its vicissitudes in the remotest times, and of its reconstruction and final establishment by the Greeks, by Thomas L. Wright, M. D., and another entitled, how to nurse sick children, intended, especially, as a help to the nurses at the Hospital for sick children, and containing directions which may be found of service to all who have the charge of the young; and from the author a treatise on the treatment of aneurism of the arteria innominata, by ligature of the right common carotid artery.

They all came to hand, at a period too late for an extended notice in the present number of the Independent. We tender our thanks to all who have thus kindly remembered us, and pledge such notice in our next as the works respectively merit. K.

EDITORIAL ITEMS.

Explanation.—The delay in the appearance of our Journal for the present month, is the result of an accident which occurred to the press; making it necessary for us to wait for the completion of repairs. Accidents will happen to the best of projects.

Death of Dr. John C. Warren, of Boston.—Seldom have the annals of Medical Literature been called upon to record, upon the necorological page, a worthier tribute to departed excellence, than when they draw the lines of mourning around the biographical sketch of Dr. Warren. He died on the morning of May 4th, in the 79th year of his age.

Exchanges.—"Boston Medical and Surgical Journal"; Buffalo Medical Journal; North Western Medical and Surgical Journal; New Hampshire Journal of Medicine; Philadelphia Medical and Surgical Journal; Montreal Medical Chronicle; Peninsular Journal of Medicine; Nelson's Lancet; Western Lancet; Medical and Surgical Reporter; College Journal; Medical Examiner; Canadian Naturalist and Geologist; Memphis Medical Recorder; New York Journal of Medicine; American Medical Gazette; Louisville Review; Iowa Medical Journal; "Southern Journal of Medical and Physical Sciences"; The American Journal of Insanity; The Medical Counsellor; Medical Observer.

National Medical Association.—Our abstract of the proceedings of the American Medical Association, has crowded out some editorial and miscellaneous items—acknowledgement of some new exchanges, news clippings, practical notes, &c. But we trust our readers will give sufficient value to the proceedings of the Association, to make all amends for any want of variety.

Abstract of the Proceedings of the Ninth Annual Session of the American Medical Association.

This great "American Congress" of the Medical Profession convened in this city on the 6th instant, at Firemen's Hall, and in all the details of its proceedings and deliberations, more than met the anticipated success of its most ardent members. We have given as complete a record of its accomplishments as our limits will justify. Much might be said in commendation of the Valedictory Address from the retiring President, Dr. George B. Wood, and the special reports, particularly those of Drs. Gross, Breckenridge, Newman and Davis. But inasmuch as they are to form a large part of the next volume of Transactions, we postpone further comment.

The association was called to order at 11 o'clock A. M., by the President, Dr. G. B. Wood, of Philadelphia, whereupon, Dr. Z. Pitcher, in behalf of the Physicians of Michigan, who were represented by delegates from their respective local societies, in a very appropriate manner, presented a cordial welcome to the members of the American Medical Association, including, also, those brethren of the Profession who were present by invitation from the British Provinces.

The roll was then called by Dr. Wister, of Pennsylvania.

On motion of Dr. Thomson, of Delaware, a recess of fifteen minutes was taken to allow the Delegates from the respective States to report one member from each State represented, as a committee to nominate officers for the ensuing year.

At the expiration of the recess, the Association was called to order, and the different State delegations then reported their choice, respectively, of delegates to serve on the nominating committee, which was constituted as follows:

Maine—N. P. Monroe,
New Hampshire—H. Peirce,
Vermont—C. L. Allen,
Massachusetts—H. H. Childs,
Rhode Island—J. E. Warren,
Connecticut—David Harrison,
New York—William Rockwell,
New Jersey—L. A. Smith,
Pennsylvania—John Neill,
Delaware—J. W. Thomson,
Maryland—P. Worth,
South Carolina—E. Geddings,
Tennessee—J. B. Lindsley,
Kentucky—W. S. Sutton,
Minnesota—C. W. LeBoutillier,
Michigan—M. Gunn,
Illinois—H. Noble,
Indiana—Dr. Winton,
Ohio—Thomas W. Gordon,
Wisconsin—W. H. Brisbane.

After the Nominating Committee had retired, Dr. Pitcher, of Michigan, from the Committee of Arrangements, submitted the following report:

In conformity to the domestic and social usages of the place of meeting, the committee have to suggest that the sessions of the Association take place in accordance with the following plan, and that they commence and terminate each day at the hours designated therein:

Tuesday—Morning session begins at 9 A. M. and ends at half-past 5 P. M.

Wednesday—Morning session begins at 9 A. M. and ends at half past 12 M. Afternoon no session.

Thursday—Morning session begins at 9 A. M. and ends at half-past 12 M. Afternoon session begins at 2 and ends at 5 P. M.

Friday—Morning session begins at 9 o'clock A. M.

This arrangement of the hours of meeting end adjournment conforms, also to the suggestions of Dr. N. S. Davis, of Illinois, and which were, on his motion, referred to this committee for their consideration by a vote of the Associatiou. Regard for the mover of the resolutions, and the authority of the body by which they were submitted to us, requires from the committee a respectful reply. Your committee, in view of the existing state of our professional literature, feel reluctant to advise a departure from the present mode of laboring to promote a higher degree of culture in those preparing to become members of the medical profession, and to establish in those already engaged in its duties a habit of recording the results of their observations. They think that the effect of such a change as is contemplated in the resolutions of Professor Davis, and the more amplified expression of his idea, contained in the address of the then President, Dr. Pope, of Missouri, delivered at Philadelphia, in 1855, can be easily foreseen. To a few who are gifted with colloquial powers, and to others who have undergone the discipline required to fit them for public debate, the interest of the meetings conducted upon the plan proposed in the resolutions would be greatly increased, but as the great body of the Association would, voluntarily, it is true, be excluded from participation in these exercises, the enthusiasm which now characterizes our anniversaries would subside, and with it the professional *esprit du corps* which has been already developed through the instrumentality of the Association. We presume that the objects for which this organization was affected have not been lost sight of by the majority of its members. Neither can it be pretended that those purposes have been so far accomplished as to justify us in laying it aside, or of diverting it from its original design.

Your committee feel that the profession has no right to rail at the public for misappreciation of it, so long as we continue to admit men into its folds destitute of that knowledge, both in nature and degree, necessary to make a decent appearance in general society, or to fit a man for the more ordinary and less responsible pursuits of life. From the early records of the association it appears that this conviction, on the part of the profession of the United States connected with the design of reforming, in certain particulars, the medical schools of our country, led to its organization in 1847, and until its mission in both respects has been accomplished, the committee would reluctantly recommend the adoption of any measure tending in their judgment to divert it from the design of its creation. Thus far the influence of the Association has gradually extended itself into the rank and file of the profession. It has increased the number of writers, given an impulse to the medical mind, and encouraged a useful and laborious claass, gratified to observe and willing to submit their observations to the public, because they can be incorporated into the body of the transactions without being subjected to a sifting criticism. It is true, that in this way, articles have been printed that did not always enure to the credit of the Association, but, at the same time, and by that means, motion and fertility have been given to minds that

would have lain fallow and unproductive, which the dread of the conspicuity belonging to a mental gymnasium would have driven into deeper obscurity. The committee, however, whilst they would resist any tendency to radicalism in ther own opinions, cannot dismiss the subject without expressing their belief that, in order to secure the objects of our organization, it is as necessary to increase the breadth and depth of its base as to elevate the shaft designed to spring from it, for without such preparation, the superstructure, however beautiful in aspect, would be of transient duration.

Having arranged the hours for meeting and adjourning, so as to place it in the power of the Association to adopt or reject, without inconvenience, the proposition of Dr. Davis, the committee respectfully ask to be excused from submitting a distinct proposition on the subject.

By order of the Committee of Arrangements,

Z. PITCHER, Chairman.

The report was accepted.

The President announced the death of the eminent Dr. John C. Warren, of Boston, Mass., in that city on Sunday morning.

Dr. Childs, of Massachusetts, felt compelled to say a few words in the connection. He had been associated with the deceased for more than half a century, and should feel that he had been derelict of duty if he neglected to speak in his laudation. Dr. Warren was the nephew of Joseph Warren, who fell gloriously at the battle of Bunker Hill. He was at the head of his profession in Massachusetts—had been President of the State Medical Society, and occupant of other elevated medical positions. His professional reputation was high, and his personal reputation spotless. His fame was not confined to Massachusetts. Though devoted to medical science, he was not limited to that alone, but paid attention to every branch of literature and art. If young members of the profession would be useful and eminent, they should follow the example of Dr. John C. Warren. To the older, the speaker would point out Dr. W.'s moral character as an example. Such a life as his inevitably terminates in a death beatified by a surety of eternal happiness.

Dr. Gross, of Kentucky, made some remarks eulogistic of the deceased. He alluded to his high reputation—a reputation, he observed, not confined to America, but extending to every corner of the civilized world. Dr. Warren was the Nestor of American surgery. Dr. G. concluded by offering the following:

Resolved, That a committee of five be appointed to draft resolutions expressive of the feelings of this Association at the loss of their late associate, Dr. John C. Warren

The resolution was adopted, and the President appointed as such committee, Dr. Gross, of Kentucky, Dr. Childs, Massachusetts, Dr. Wood, of New York, Dr. Pitcher, of Michigan, and Dr. Geddings, of South Carolina.

On motion, the Association adjourned to 2 P. M.

AFTERNOON SESSION.

The President called the Association to order at 2 o'clock.

The Secretary read a letter from Dr. Grafton Tyler, of the District of Columbia, one of the Vice Presidents, excusing his absence.

He also read letters from the State Medical Society of Tennessee, and from the University of Nashville, inviting the Association to hold its next annual session at Nashville, Tennessee. Also, one tendering the use of the Hall of Representatives of that State for the purposes of said session. Referred to Committee on Nominations.

The Committee on Nominations submitted the following report:

The Committee on Nominations unanimously nominate the following officers of the American Medical Association for the ensuing year:

President—Dr. Zina Pitcher, of Detroit.

Vice Presidents—Drs. Thomas W. Blatchford, of New York; Wm. K. Bowling, of Tennessee; E. Geddings, of South Carolina; W. H. Brisbane, of Wisconsin.

Secretaries—Drs. Wm. Brodie, of Michigan; R. C. Foster, of Tennessee.

Treasurer—Dr. Casper Wister, of Pennsylvania.

The report was accepted, and the nominations unanimously confirmed.

On motion of Dr. Atlee, of Pennsylvania, the President was requested to deliver his annual address.

Dr. Geo. B. Wood, of Pennsylvania, on retiring from the chair, said:

Gentlemen—Custom demands that your President should do something more than assure you of his co-operation and good wishes when leaving behind him this post of honor. Before quitting it, therefore, I desire to say a few parting words, which shall assure you of my gratitude, and also deem this a fitting occasion to note the condition and prospects of this society.

First let us glance at the past, that we may the better look forward to the future. Have the high aims and noble designs of the society been achieved? Have its objects been heeded and rigorously pursued? Have its objects been heeded and rigorously pursued? Have its annual gatherings been encouraged, and the utmost of good wrought by them, or have they been fruitless and of no avail? Have they passed like a phantom ship leaving no track nor trace in their way, and been forgotten? Happily no one has the power truthfully to answer in the negative. True, not all that was proposed ed has been done It started off under almost insuperable obstacles, and in striving suddenly to overcome its opponents, hoped against the possible. Finding too heavy a task before it, it fell back to humble aims. But nothing was lost, its progress has been steady, and its bread is cast upon the waters to be found after many days. It is not necessary to appeal to the ponderous volumes of its transactions to show its advance There is much chaff in these volumes, as in every book save one, but there we also find much that is good. Seed has been scattered and will spring up and grow into usefulness. Its meetings have aroused agitation, and agitation purifies and renders available what before was crude and useless. The medical mind, prior to the organization of this Association, was in a state of mental inertia. There was danger that the profession would sink into a mere business. The great struggle in medical schools was to obtain schollars, and in her practice to procure patients; quackery loomed up and almost obscured the bounds which separate the true from the false. The lines of demarkation were imperfectly drawn, and for a time there was doubt which would gain the ascendency. But this Association rose, and a new spirit was awakened. No sooner had its flag been to the breeze, than thousands hastened to join the standard in a crusade against quackery.

The great masses of society were moved, and hundreds upon hundreds came forth ready to assist in revivifying the waining spirit of the profession. The opposition was strong, but its clamors were drowned in the cry of onward! onward! It seemed as if the professional millenium had come. But its steadily advancing steps need not be traced, they are familliar to you all. Whatever temporary arrangements could have been made, were of no avail. We have had "paper republics, thick as autumn leaves that strew the brooks of Vallumbrosa," and none have stood the test of years. The same has been true in lesser associations. From the past, this association has discovered the rocks and quicksauds upon which others have been wrecked, and is content to follow those forms which have been crowded with success. Who has

lived not to see it, during its brief existence, increase slowly but irresistably. It has regulated and combined all systems to plant itself upon a firm basis, and the greatest bond of its union and durability, is its adoption of a code of medical ethics, which has been sanctioned by the voice of wisdom and experience. Should any one find themselves cherishing repugnance to this code, were it not best to inquire whether it does not spring from himself rather than from any thing in that code. Which is most likely to be true, the popular voice sanctioned by experience, or the individual opinion unsustained? Modesty would induce the man to own that the repugnance is an offspring of his own heart. I have no doubt but that code will conduce to the harmony and prosperity of this association, and I would recommend that it be placed in the hands of every student, and that he regulate his own conduct and educate his heart by its precepts. Indeed, it is almost indispensable that it be placed within the reach of every member, or of those desiring to follow the profession. I do believe that the young physician going forth to his labors, by wearing this aegis will be preserved from evil.

Medical societies are perfect types of medical practice and experience. They have had weight in our national councils in determining the rank of surgeons in the navy, and upon one occasion its voice was heard in Congress, upon a petition for a copy-right law between England and the United States, and if ever that law is passed, this association will have contributed much towards that result.

There is another view of this association, which I desire to notice. Isolation from each other renders man selfish and unjust to his fellows. He is naturally gregarious, and was born to grow up. Each comes here for relaxation, and turns his silver lining to the sun, and becomes a genial companion, reaping rich lessons of experience and courtesy, which better fit him for the discharge of his duties. The parting memories of these assemblies, serve as cords to bind him to the profession, and counteract the prejudices of the political system.

Having thus hastily scanned the past, let us glance briefly at the future. Experience should teach us that great objects are not attained by sweeping changes, but that their results are gained point by point. This is all important in the pursuit of science and public good. It is important to the profession that a higher qualification be demanded. Of course no coercion can be adopted, but it is impossible that intelligent men should not respect a recommendation of this character, coming from so high a source. There should be something more than a nominal examination to entitle the student to enroll himself among the medical profession. This can only be accomplished by slow steps, until, as the water wears away the rock, this requirement wears its way to the conscience of the masses. We must carefully avoid every appearance of violence. Opinion once conciliated is a point already advanced, which, followed up, the Association may yet see its aims and objects crowned with success. Pursuing one undeviating course, we shall yet rejoice in the most glorious results.

We must maintain the standard of morality set down, and adhere to the line of demarkation between the regular and the irregular practice, without controversy or contention. To wage war upon quackery, is what most delights it. We may explain our position to friends, demonstrate the fallacy of their reasonings, and expose imposture and humbug, but with quacks hold no arguments. With the presumed advantages of their practice, they have attempted our disgrace. They call us allopothists, because we seek to produce a condition of the system opposite to that of the disease, while they propose cures by giving like for like. Homeopathists graciously concede cures effected by our practice, but still deny the correctness of our theory. It must

be left to the masses to decide between the systems. The genuine Homeopathist lets the disease alone, and nature recovers herself. He prepares neatly dressed medicines, which are more palatable to the delicate than more powerful agents, and praises the wonderful antidote only because the patient does not die. We profess intelligence and knowledge of the cure of disease wherever it may be found. This is the light which the medical profession presents to the public, and we are pledged upon our honors before it to use every means to increase our knowledge and skill. This we must do as honest men, intent on performing our duty. We may discard the false epithet—Allopathists, as a discourtesy to practitioners of a great art, who claim to be gentlemen.

The efficiency of the profession is increased by persevering in the improvement of the science of medicine. The offering of prizes for essays, the completing of our proceedings and other like inducements to the ambitious, are alike useful and worthy of attention. The more we improve ourselves the better able shall we be to perform our duty to the public. We are called upon constantly to watch and to give up our best efforts to preserve the good health of the community, and may not relax a single effort so long as there is aught left to do

You are aware that the ravages of the small-pox in many of our cities, have been unaccountable, and yet it is positively believed that vaccination and re-vaccination is a perfect preventive. The profession and the public have been too careless, and the most fearless results have ensued. It is your duty to warn the public and put them on the side of safety. Many, perhaps, allow self-interest to come in as a caution to keep them from their patients, while it would be more to their interest to attend upon a practical case. Perhaps I am unjust to the profession But it has happened to me to attend upon numerous cases of small-pox, and not a case within my knowledge ever occurred where re-vaccination had been performed. It is highly important that the public were aroused to the importance of this subject, and that it be laid before every legislature, that a law may be enacted to compel safety.

I must close by begging an excuse for the length of my remarks, but when man gives free rein to the tide of his thoughts, it is not easy to say, "thus far shalt thou go and no farther." I thank you most cordially for your attention, and hope that the affairs of this convention may go on so harmoniously that you will look back to this meeting in Detroit with genial memory, and ever be proud that you have assisted in its deliberations.

At the conclusion of the address, on motion of Dr. Atlee, of Pa.—

Resolved, That the thanks of the Association be presented to our late President for the able and interesting parting address he has just delivered, and that he be requested to present to the Committee of Publication, a copy for preservation in our transactions.

On motion of Dr. Atlee, of Pa.—

Resolved, That a committee of three be appointed to inform the President and Vice-Presidents, elect, of their election, and conduct them to their seats.

The President appointed, as such committee, Drs. Atlee, of Pa., Reeves, of Ohio, and Sutton, of Ky.

Upon taking the chair, Dr. Pitcher said :—

Although fully aware of my indebtedness for this distinction, to your observance of a custom equivalent, in force, to positive law, of selecting your presiding officer, in each successive year, from the State in which the meeting of the Association is held. I feel myself more honored by your partiality, than if I had received the same mark of respect from any other body of men known to the annals of our country.

This sentiment of regard for the body towards which I now hold, by this

act of yours, so delicate and interesting a relation, has been inspired by a contemplation of the ideal of the physician, and strengthened by my growing acquaintance with the individuals which compose it.

Being unaccustomed to presiding in deliberative assemblies, I shall throw myself upon the indulgence of the Association, and rely upon the kindness and intelligent co-operation of the individual members for assistance in performing the duties of the chair.

Whilst thanking you most cordially for this expression of confidence, I can only assure you that such abilities as I possess shall be devoted to the prosperity of the Association and the harmony of its proceedings.

Dr. Palmer, of Ill., from the Committee on Prize Essays and Volunteer Communications, submitted the following:

"The Committee on Prize Essays and Volunteer Communications," report, that some months since they issued a card, which was extensively published in the medical journals, setting forth the terms upon which essays, intended for prizes, would be received; but that the number of papers presented has been but four.

By referring to the past records of the Association, it is found that the numbers received by preceding committees have been, in 1852, sixteen; in 1853, fifteen; in 1854, nine; in 1855, six; and in 1856, four. Your committee beg leave to call attention to this almost regular and quite rapid decrease in the number of essays presented, for the purpose of having the Association consider whether there be not danger that the number which may hereafter be furnished, will be so small as to afford insufficient range of comparison and choice to cause the preference shown to be much valued, if, in deed, presentations do not cease altogether, and whether any means should be devised for preventing such a result.

The essays received by your committee have been subjected to a careful examination; and while admitting that they all possess a degree of merit which would render them suggestive and useful, if given to the profession, still, in their opinion, but one manifests that evidence of careful and laborious investigation, that wide scope and rigid accuracy of logical reasoning, that chasteness of expression and artistic skill in the presentation of the subject, as to furnish sufficient claim for awarding a prize by this body.

But one prize is therefore awarded. The essay selected for this honor, bears the title—"An Essay on the Arterial Circulation."

It is regarded by the committee as possessing the merits just alluded to, and while not wishing to give an unqualified endorsement of all the views which it contains, they regard it as possessing not only interest in its physiological and scientific relations, but also real value in its pathological and practical bearings.

The production has considerable length, and by the fullness with which the views advanced are discussed, it partakes as much of the nature of a treatise as an essay. It has, at least, one quality which Lord Bacon considered necessary to a treatise, as distinguished from an essay,—it required a degree of leisure on the part of the writer, and will require the same on the part of the reader for him fully to appreciate its value.

The essay bears the motto—"*Una est Veritas.*"

Signed, A. B. PALMER, Ch'n., SAMUEL DENTON,
SILASS H. DOUGLASS, AB'M. SAGER, E. ANDREWS.

On breaking the seal of the accompying packet, Dr. Henry Hartshorn, of Philadelphia, Pa., was found to be the successful essayist. Report accepted.

Dr. Blatchford, of New York, from the Committee on "Hydrophobia, and the connection of the season of the year with its Prevalence," read a report thereon. The committee, in conclusion, submitted the following resolution, which was adopted:

Resolved, That the Secretary transmit to the Governor of each State, a copy of the statistical part of this report, with the respectful request that he would bring the subject before the Legislature of the State over which he presides, that, in their wisdom, they may devise and unite upon a plan by which the evil may be mitigated, if not removed.

Dr. Atlee, of Pa., moved to refer the prize essay of D. Hartshorn on Arterial Circulation, and the report of Dr. Blatchford on Hydrophobia, to the Committee on Publication. Carried.

The Committee on Nominations, reported in favor of holding the next annual meeting of the Association at Nashville, Tenn. Report adopted.

Dr. Wister, of Pa, from the Committee on Publication, made the annual report, and urged the enforcement of the following resolution :

Resolved, That, hereafter, beginning with the session of 1856, no report, or other paper, shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before June 1st.

Dr. Wister, of Pa., the Treasurer, read his annual report. It recommends that the Treasurer be requested, at an early date after the adjournment of the present meeting, to address a circular to each permanent member, announcing the abrogation of the resolution of 1854—making a yearly subscription to the transactions obligatory—and the consequent restoration to membership of all those dropped from the published list of that year,—advertising, also, the practicability of procuring back numbers of the transactions, with information as to the cost at which the series of volumes may be rendered complete, or an entire set furnished by the Association.

The account of the Treasurer with the Association, is as follows :—

DR.

To cash paid Dr. John L. Atlee, of Committee on Washington Monument Stone,	$498 70
To cash paid C. B. Norton, for porterage and packing Vol. VII., in New York,	8 00
To cash paid J. D. Trask, for Prize Essay,	100 00
To cash paid for postage of Secretary,	2 50
To cash paid D. C. Baxter, for engravings of Vol. VIII.,	72 75
To cash paid for postage of Chairman of Publicatio2 Committee,	4 09
To cash paid Thos. Sinclair & Co., for Lithographs for Vol.. VIII.	101 20
To cash paid T. R. & P. G. Collins, for printing and binding 1,100 copies of Vol. VIII.,	1,746 75
To cash paid T. R. & P. G. Collins for binding 25 copies Vol. VI, ced printing notices,	4 52
To cash paid H. Barnes for distribution of Vol. VIII., and services as clerk,	50 00
To cash paid T. R. & P. G. Collins, for printing notices	1 25
To cash paid Blanchard & Lea, for freight, porterage, boxes, &c., for Vol. VIII.	34 99
To cash paid for postage, envelopes, and stationery of Treasurer,	5 39
To balance,	950 52
	$3,584 26

Conclusion in next number.

☞ The Fourth Annual Meeting of the Detroit Medical Society, was held at the residence of the President, Dr. Inglis. The usual order of business of the meeting having been disposed of, the Society proceeded to the election of Officers for the ensuing six months, which resulted as follows :

For President—Dr. L. G. ROBINSON. *For Vice President*—Dr. P. KLEIN. *For Secretary*—Dr. D. HENDERSON.

D. HENDERSON, M. D., *Secretary.*

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.—Continued.* By HENRY GOADBY, M.D., F.L.S.

The root of the common, and the Turkey rhubarb, furnish beautiful examples of this structure. In the latter, raphides abound to so great an extent that the best known test of it is to chew a small portion, and if it be found particularly *gritty*, it is certain that the specimen is genuine Turkey rhubarb.* The grittiness results from the presence of the quatuor crystals of the oxalate of lime, which is not found in the English rhubarb—or pie-plant, as it is commonly called.

This vegetable, therefore, affords another instance of the salutary benefits resulting from the transmutation of lime, as all the varieties of rhubarb, like the onion, generate oxalic acid.

By the operation of some unknown law, it happens that lime in combination with the same acid, produces crystals of different form in different plants. Thus, the crystals are uniformly *prismatic* in the onion, and as constantly square-sided in the

* This fact was originally promulgated by the late Dr. Jonathan Pereira, who published it in his lectures, and incorporated it in his Materia Medica. It has been subsequently copied, but without acknowledgment.

Turkey rhubarb, and yet in both cases they are simply oxalate of lime.

Many of the forms of raphides are very beautiful, but probably one of the most remarkable is found in the stems and leaves of the white, (*nymphea odorata,*) and (*nuphar advena,*) yellow, Pond Lilies. In making a transverse section of the stem of either of these Lilies, a number of extremely large raphides of curious and peculiar form are found. The bodies of these raphides are generally, but not always tri-radiate, and from the summit of each lobe of the triangle, springs three or four spiculæ which gradually accuminate. The body of the raphis, and every portion of it is covered with minute tubercles.

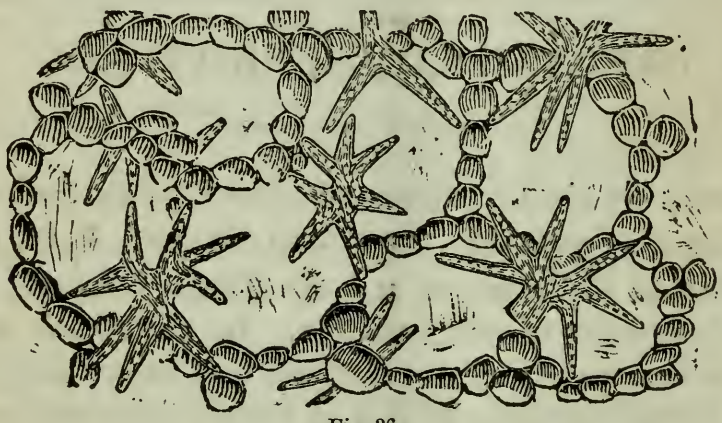

Fig. 36.

The first time we saw these raphides, they were clinging to, and appeared to form a portion of *Spongia fluviatilis.* So numerous were they, and apparently so intimately incorporated with the sponge, that we had no hesitation in believing they formed a part of it, and that we had discovered the spiculum of a new species of fresh water sponge; as such we described and figured them in the Journal of the Canadian institute. But when, during the succeeding summer, we examined the ultimate structure of the tissues of the Pond Lilies, we found we had made a great mistake, and that our fancied siliceous spiculum of a sponge, was merely a *raphis,* common to both of these plants. The sponge came into our possession during the autumnal season of the year, and we now believe that the raphides had been liberated by the rotting of the leaves and stems of the lilies, and floating down the stream, they became

entangled in the meshes of the fresh-water sponge, in connection with which we found them.

To prevent the possibility of mistake, and to liberate them from the extraneous matter by which they were surrounded, we took the precaution to submit them to the action of long continued boiling in strong nitric acid—a process which they endured with so much impunity as to confirm the opinion we firstly entertained in regard to them. Our failure in this instance may be useful to others no less than to ourself, in the lesson of caution which it forcibly inculcates. Moreover, it shows the necessity which the physiologist, the botanist, the naturalist and the microscopist has for the most thorough and intimate acquaintaince with the ultimate structure of all organic matter, and inorganic substance.

We have every reason to believe that the raphides of the Pond Lilies are not known, as we have sedulously sought in vain for any description of them.

Mineral matter is developed at least as extensively in the animal as in the vegetable kingdom, and if we can succeed in demonstrating that the mineral matter of the former is deposited in cells especially formed for its reception, we shall have established another *link of connection.*

Unlike what occurs in the vegetable kingdom, we find that in animals the mineral matter is restricted to the *sclerogenus* (from the Greek *skleros,* hard,) tissues, or, in other words, deposited in the cells of the true skeleton.

Every animal in existence possesses a skeleton of some kind. In the class *Annellida,* or worms, whether of the earth, the fresh waters, or the Ocean, we find, with few exceptions, a simple *dermal* (*Derma*-skin,) skeleton, which remains throughout life unconsolidated by mineral matter. So, too, with regard to many individuals of the class *Mollusca,* viz. : the Cuttle fishes, many Pteropods, several Nudibranchs and others.

These, however, form the exceptions to an otherwise general rule ; the consolidation of the skeleton being of the greatest importance to the majority of animals. Commencing our enquiries with the class of Polyps, we find that the simplest forms

of these animals—Hydra or fresh-water Polyp for example—possess merely the dermal skeleton.

We feel that it is foreign to our purpose, because unsuited to the special object we have in view, to enter into a description of the natural history of this well-known animal ; all that concerns us at present being its skeleton. Passing from this lowly organized creature, to the consideration of the structure and affinities of some of its allies, we find a number of them developing an internal skeleton composed of carbonate of lime. The red coral of commerce is a skeleton of this kind, being formed by the Polyp, known to Naturalists as the *Corallium Rubrum*, or Red Coral, and the whole class of what are called White Corals, are of the same nature. It will be readily understood that the animals in question obtain the carbonate of lime from the Ocean, which is always more or less impregnated with this material. The forms, however, in which they deposit it in their interior, is extremely various, always beautiful and invariably characteristic of species.

We present a figure of the transverse section of a ramose (branched) white coral, as seen by direct light, and magnified five diameters. (See Fig. 37). We need scarcely direct attention to its great beauty.

Fig. 37.

The cells for the reception of the Polyps, are minute, and every where placed on its external surface ; these particular cells are shown in section surrounding the illustration.

The whole structure is remarkable for the combination of great strength with extreme lightness, the holes, or pores, of course, contributing to this latter property.

We do not know a more remarkable fact than the great disparity in size and form of the animal cells, in which the mineral matter is placed, and *the cells formed by the peculiar arrangement of the carbonate* of lime. In looking upon the microscopical view of the coral presented above, we think it would be fair to assume that the animal cells should bear a close re-

lationship to the *apparent manifestation* of them as seen cast in lime ; but if we de-calcify the coral by immersing it in a diluted acid, (Hydrochloric or Acetic,) we shall find that the contrary is the case.

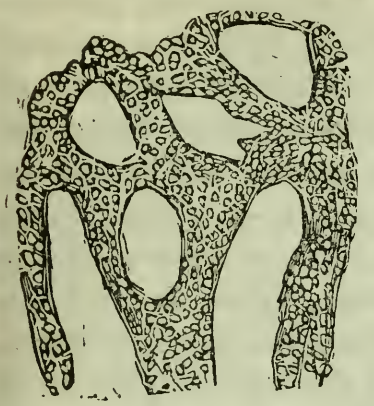

Fig. 38.

In Figure 38 we have a view of the de-calcified coral in question, and as the carbonate of lime has been entirely removed, all that remains are the cells of animal matter in which the lime had been deposited. This preparation was magnified two hundred diameters to show its structure, but it has been greatly reduced in the drawing. It will be seen that much disparity in size exists between these cells and the cells of the calcified tissue.

Among the series of the White Corals, none present greater claims to our admiration than the *Caryophillidæ*, many of which are, microscopically speaking, of large size.

In Figure 39 we have a drawing of a Caryophillum, from North Carolina, magnified ten diameters. In our illustration we can only show the internal skeleton ; originally, the whole of it was covered (especially on the sides,) by a thin external flesh. The outer form of this coral is conical with a mere apex, by which it attaches itself to foreign substances, or to each other, for these polyps are gregarious. The large circular aperture seen in the figure is also conical—terminating at the point lettered *a*. In the center of the transverse diameter, and immediately above this portion of the coral, the mouth furnished with its long filliform tentacula, was placed; and this organ conducted into a capacious stomach, which occupied the remainder of the space within the periphery of the circumference. This stomach, however, was divided by a series of partitions ; the dark spaces between the divisions, lettered *b*, *b*, show the cavities into which the folds of the stomach en-

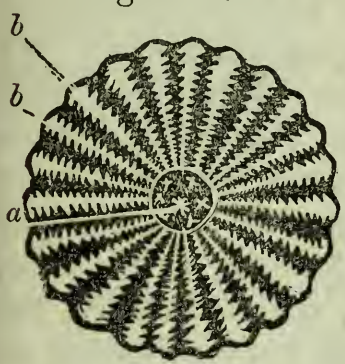

Fig. 39.

tered. These were also the spaces in which the ova were generated, and where they remained till mature, and then they were extruded by the mouth. The white lines, therefore, show the divisions upon which the stomach was supported.

In one of the Orders of the Class, *Echinodermata*, (prickly skinned animals, or Star-fishes,) the *Echini*, we have a group of animals, all of which develop a large amount of carbonate of lime in their skeleton and its appendages. Thin transverse sections of the spine of Echinus, of any species, will present an object of great beauty under the microscope—a beauty no less of form, which is always peculiar and characteristic, but frequently of color, which, in some species, is of extraordinary magnificence. We present the microscopic view of a transverse section of the spine of *Cidaris*, (Fig. 40,) magnified four diameters. Our artist has done ample justice to the structure of this beautiful specimen, and its equally beautiful congeners—the whole of this series of figures having been engraved under a microscope—but he cannot display their color. We have selected the spines of only four species of Echini, and it will be readily perceived that no two are alike. Figure 41 represents a specimen remarkable for the possession of bands of the most brilliant purple color, which, contrasting with the adjacent white cells, forms an extremely beautiful object.

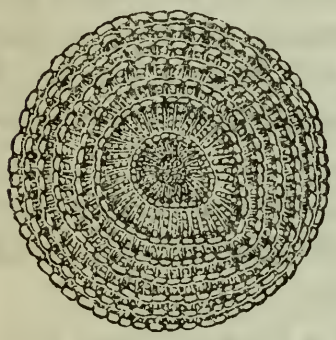

Fig. 40.

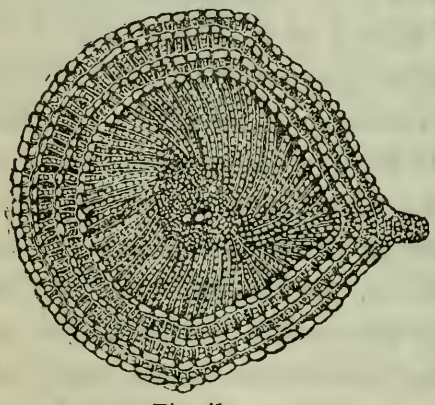

Fig. 41.

It must be borne in mind that these illustrations of spines of Echini show not the animal membrane at all, but simply cells formed of carbonate of lime, and the structure is, in every instance, entirely solid. So dense is the lime impacted in these cells, and so greatly does it preponderate, that our attempts to de-calcify some of these specimens, have entirely failed, probably because our acid solution was a little too strong.

An animal closely allied to Cidaris, which we have every reason to believe is a Transatlantic species—the name of which we have been unable to ascertain—presents a spine of great length and breadth. Some of them being three and a half inches long, by five-eights wide, and uniformly white when seen in transverse section. An illustration of this spine is given in Fig. 42, and by comparing this with the preceeding figures it will be found to possess a very definite and characteristic structure.

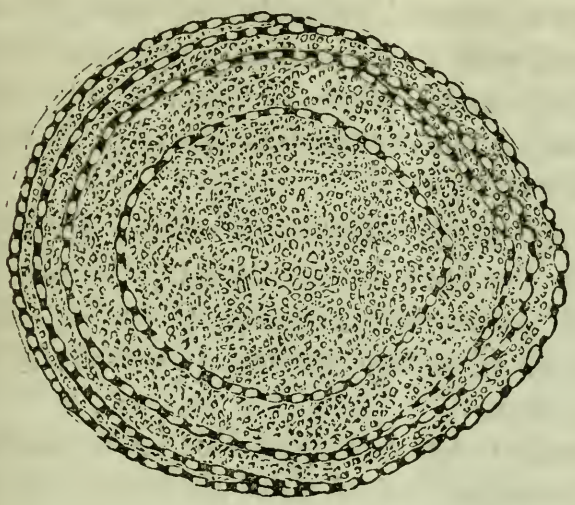

Fig. 42.

Among our collection of such objects, we have a transverse section of a very small spine—so small that while each of the foregoing figures were magnified four times, we could only do justice to this by amplifying it eight diameters. It is shown in Fig. 43. It is a very curious fact, that if a longitudinal section of the spine of Echinus of any species be made, it will be found to agree with a longitudinal section of the spine of any other species. In transverse section we see them differ so much that no two species are alike. The longitudinal section, however, reveals the principles of their original formation.

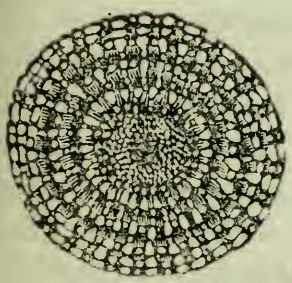

Fig. 43.

Fig. 44.

By referring to figure 44, which represents a longitudinal section of the spine of the same Echinus, as shown transversely in figure 43, and, like it, magnified eight diameters, we see represented a consecutive series of growths, by addition to the external surface. It will be seen that the section presents seven elongated cones; the small-

est was firstly formed, the second was superadded, and on this principle, layer succeeded layer till the spine was developed to the size in which we found it. On this principle there need be no limit to their growth. The lower concave portion of the specimen fitted to a rounded tubercle, belonging to the shell of the Echinus, and with its assistance constituted a universal joint. It was kept in its place by capsular ligament, and provided with muscles and tendons to rotate or give motion in any required direction.

In the foregoing illustrations of mineral matter developed in the animal kingdom, we have demonstrated (with but one exception) the calcified tissues only; hereafter we shall show the formation of the cells of animal matter, in which the carbonate of lime is deposited.

Allusion has been made to the necessity which some animals have for a peculiar consolidation of their skeleton. It frequently happens that, in addition to presenting a large surface for the attachment of muscles, giving the required protection to internal viscera and all the important organs of life, the skeleton is made to perform another and peculiar function, viz: in aquatic animals to subserve, by its ponderosity, the purposes of an anchor. The star fishes (Echini), which we have already cited, seek the depths of the ocean as their natural habitat, and surrounded by submerged rocks, they are enabled to maintain their position in this situation without any effort of muscular power—attached, it is true, by their tubular feet, but chiefly by the weight of the carbonate of lime which enters so largely into their composition. Again, too, the Lobster —the Epicurean's dainty—who also seeks the bottom of the ocean, would be unable to resist the agitation of the water, when disturbed by storms, were it not for the use it makes of one claw, especially designed as a *hold-fast*, or kind of anchor, greatly assisted by the weight of lime in the composition of its skeleton.

In the inferior, (invertebrate) air-breathing animals, the structure of the skeleton is essentially different. In the class of Myriapods, Insecta and Arachnida, the carbonate of lime would be worse than useless—it would altogether prevent them

from performing the functions of their nature. Destined, many of them, to soar through the liquid atmosphere, and all of them remarkable for their surprising activity on land, they require a skeleton that shall not only be tough, strong and resisting, but of the utmost conceivable lightness. Hence we find that the more ponderous earths are altogether omitted, and their skeleton is consolidated by the *Phosphates*, which combine strength with lightness, in preference to the *carbonate* of lime. So that in these creatures we find developed in the animal cells of their skeleton the Phosphates of Iron, Lime, and Magnesia.

But to return to the inhabitants of the ocean. The marine and fresh-water testaceous Mollusca all possess in their external skeleton, or shell, carbonate of lime, of greater or less density, to the exclusion of any other form of mineral matter.

In figure 3—to show the resemblance subsisting in animal and vegetable cells, so far as their form is concerned—we exhibited an illustration of the calcified cells of the Pinna Shell, and in figure 45 we show the de-calcified animal membrane of the same shell.

To be continued.

Action of Sugar on the Teeth.—M. Larez, (*Journ. de Chimic Med. Feb.* 1856,) in a course of investigation, arrived at the following conclusions, viz:—

1. Refined sugar, from either cane or beets, is injurious to healthy teeth, either by immediate contact with these organs, or by the gas developed, owing to its stoppage in the stomach.

2. If a tooth is macerated in a saturated solution of sugar, it is so much altered in its chemical composition that it becomes gelatinous, and its enamel opaque, spongy, and easily broken.

3. This modification is due, not to free acid, but to a tendency of sugar to combine with the calcareous basis of the tooth.—*Am. Jour. of Pharmacy.*

ARTICLE II.—*An Improved Method of Operating for Strabismus.* By C. HOLTHOUSE, Esq., F. R. C. S., E., *Surgeon to the Western Dispensary for Diseases of the Eye, Assistant Surgeon, and Lecturer on Anatomy, to the Westminster Hospital, London.*

In the 304th number of the *Medical Times and Gazette* of the present year, I called the attention of the profession to a method of operating for Strabismus, which had given me more favorable results than I had seen obtained by any other means. Since the above date I have done many more operations according to this method, and am so convinced of its *superiority to all others*, that I make no apology for again introducing the subject; before doing so, however, it may be as well to state briefly the results which follow the operation, when done in the ordinary manner.

"In no case," observes Mr. Bennett Lucas, "did the incision of the conjunctiva heal, by the slightest approach to immediate union; on the contrary, in the most favorable operation, the edges of the incision of the conjunctiva were fully a line distant from each other; and in the majority of them, they were even more distant than this. Again, the conjunctiva in a few cases was moveable over the sclerotic coat, in the site of the cicatrix; but in the majority, both membranes were adherent in this situation." Further on he observes: "It occasionally happens that the healing process does not proceed so satisfactorily as has just been described, and at the end of eight or ten days, the granulations shoot from the sub-conjunctival cellular tissue, and rise between the edges of the conjunctiva;" and a case, he says, "had been communicated to him in which abscess within the orbit followed the operation."

Dr. Mackenzie remarks: "Some of the unfavorable effects that are apt to arise from the operation are trivial, but others are important." Among the first, he mentions "the white cicatrix of the conjunctiva left by the operation;" and he then goes on to observe: "The eye which has had the adductor divided presents a greater gap between the cornea and caruncula than natural: the caruncula is more sunken, the lids more open, the eye more prominent, and covered at the nasal angle."

* * * "If both eyes have been operated on, both are rendered more prominent than natural, but being equally so, the circumstance attracts less notice; but if the eye projects, and the projection is great, the physiognomy is very remarkably and disagreeably affected." Further on he observes: "One of the most annoying consequences of the operation is inordinate eversion of the eye, when the adductor has been divided, which is followed by a disagreeable expression of countenance, giddiness, and such a degree of double vision, as unfits the patient for pursuing any employment, and even for walking about, with both eyes open." This contretemps he illustrates by the following case. A young lady from the west of Scotland calling upon me with slight convergent squint, I advised her against any operation. She went to Edinburgh, where she was to be operated on without letting her friends know it. The operation was to be very easy, and she was to return with her eyes straight. In two or three days, severe inflammation followed the operation, with great swelling of the eye, requiring the application of leeches, and keeping her in bed for six weeks. The eye turned to the temple, and she went home, ashamed to be seen. Another drawback to the operation is a return of the inversion of the eye that is operated on within a week or two, and which this author attributes to "the reciprocal affection of the two eyes not being overcome," but which, I have reason to believe, is sometimes caused by the contraction ensuing on the cicatrization of a large conjunctival wound.

Such, then, according to our best writers, are some of the consequences of the ordinary operation for Strabismus—all, or nearly all of which, may be avoided, and indeed cannot take place, if the operation be done sub-conjunctivally.

This sub-conjunctival mode of dividing the faulty muscle in Strabismus, which is merely an extension of the principle of the sub-cutaneous section of tendons in club foot, was, I believe, first recommended and practiced by Mons. Guerin, in France. In 1843, Mr. Brooke, my friend and colleague at the Westminster Hospital, wrote a paper on the subject, in which the defects inseparable from the ordinary method of operating

were portrayed, and the sub-conjunctival section proposed as a remedy; but his little essay does not appear to have received the attention it deserved. From that time till the publication of my lectures on Strabismus, two years ago, the operation had been scarcely noticed by any English writers, except for the purpose of condemnation. In that work I ventured for the first time to draw the attention of the profession to its merits, and pointed out its advantages in the following words: "In the first place, the small puncture made by the scissors is entirely covered by the lower eyelid, so that not only is there no breach of continuity visible in the conjunctiva, but all air is excluded from the wound, and thus the accession of inflammation is prevented.

Secondly, the relations of the conjunctiva to the eye-ball and the eyelids, being undisturbed by the operation, the symmetry of the two eyes is preserved, and the plica semilunaris and caruncle maintain their normal position.

Lastly, it is followed by less protrusion of the eye than results from the ordinary method of dividing the muscle."

The above advantages are so obvious and decided, that I was not surprised, on my return from the East, to find that Mr. Critchett had, during my absence, come forward as the champion of this principle, and that his method of doing the operation, as set forth in the *Lancet* of May 19, 1855, had been adopted by some of his colleagues at the Royal Ophthalmic Hospital in Moorfields. It is not my intention to criticise either his or other operations that have been undertaken sub:conjunctivally. I will merely observe that, having seen them performed by their respective inventors, and having practiced them myself with their own instruments, I pronounce, unhesitatingly, that neither in simplicity nor effectiveness are they at all comparable to that which it is the object of this paper to recommend. The operation, we will suppose, for convergent Strabismus is thus performed. The eyelids being held apart by the spring speculum, and the eye drawn from its unnatural position a small incision must be made with a pair of probe-pointed scissors through the conjunctiva and ocular fascia down to the sclerotic; this should be made three or four lines internal to the cornea,

a little above or below a line horizontal with its upper or lower border, according as it is elected to divide the muscle from above, or from below. Into the aperture made by the scissörs the knife described in the 304th number of the *Medical Times and Gazette* is introduced and passed underneath the muscle; its back must then be turned to the sclerotic, and its sharp edge towards the tendon of the Rectus, which quickly yields to the slightest sawing movement of the knife, and generally with a very audible crack: the instrument must now be withdrawn through the same aperture at which it was entered, and the operation is completed.

The knife alluded to was designed by myself after repeated trials of a variety of instruments on the dead subject. Neither Mons. Guerin's knife, which has a convex edge, nor Mr. Brooke's, which has a concave, can be depended on for dividing completely the muscle oniy without the conjunctiva; nothing but a cutting edge, perfectly straight, will effect this. The angle which the blade of the knife forms with its handle facilitates its introduction beneath the muscle, and approximates it to the form, as indeed it subserves the purposes of the blunt hook, while its blunted extremity protects the sclerotic from injury, and thus does away with the necessity for a director.

No. 2 *Storey's Gate, St. James' Park, London, June* 4, 1856.

ARTICLE III.—*A novel Case of Labor.* By O. H. CHIPMAN, *Grand Rapids, Mich.*

On the night of November 3d, 1855, was called to see Mrs. Wm. O'Brien, an Irish women residing in the town of Walker. The messenger who came for me, remarked, "you had better take your instruments, for last year she had an awful time which near kil't her." When I arrived, found her with slight but regular pains, and in a state of high nervous excitement. Upon interogating her, and the woman in attendance, with regard to the history of her case, I learned that about twenty months previous she was delivered of a child; that Dr. B—— was with her; had a breech or feet presentation, and after the

delivery of the body, he, by some means, (fair or foul,) severed the body from the head. Dr. Shephard was sent for, and removed the head. The remembrance of her former sufferings kept her in a constant state of nervous excitement.

Upon making an examination, I found a slight hemorrhage, which, I was informed, had existed for two or three days ; the mouth of the Uterus was fully dilated ; next to the Sacrum I dicovered a hard, bony substance, circular in form, about one and a-half inches in thickness, and four in diameter. The head of a child was felt above this hard body. The woman said that she was eight months advanced in pregnancy, and when at five months, was taken with labor pains, and had some flowing, but on taking some powders that were prescribed, all symptoms of abortion passed off. In about three hours after my arrival, a mummyfied dead fœtus was expelled, and the circular body next the sacrum, proved to be the flattened head of this dead fœtus, every part of which was perfect, although attenuated and shrivcled in appearance.

In the after part of the day she was delivered of a living child, having the appearance of about eight months development, which lived about four days.

I regard this case, of interest, inasmuch as it shows the efforts of Nature to preserve the living child, and secure its complete development. The dead fœtus remaining in the Uterus without producing sufficient irritation to bring about labor pains, and thus endangering the life of the other fœtus. The flattened head of the first, is also worthy of notice, as it was caused, no doubt, by the pressure of the head of the living child, laying, as it did, posterior to the fully developed child.

Grand Rapids, June, 1856.

Ipecacuanha Plants.—Prof. Joseph Carson, of the University of Pennsylvania, has received a box containing several living plants of Cephaëlis Ipecacuanha, sent from Brazil, by a correspondent in Rio. We have seen these plants in the greenhouse of Prof. Wood, and find that three of them are healthy, and likely to thrive. So far as we are aware, these are the first living specimens of the Cephaëlis that have reached this country.—*Am. Jour. of Pharmacy.*

ARTICLE IV.—*The Physiognomy of Disease.*

From the earliest period in the history of our science, the value of symptoms, and, therefore, the importance of that department of general pathology, which treats of the *symptoms* and *signs* of disease have been fully recognized and appreciated. Much attention, too, has been devoted to the classification of symptoms, hence the professional reader will find in this connection, the terms *local* and *general* or *constitutional ; idiopathic*, when expressive of a certain fact or condition, *symptomatic* and *secondary* when significant of another fact ; *premonitory* and *precursory* as indicating a different idea ; also *diagnostic*, *pathognmomodnic*, and *pathognostic*, therefore, *therapeutic*, as pointing to a required course of treatment. Again, *physical*, as expressive of certain signs or marked phenomena, which belong to the body, to some organ or apparatus of organs intrinsically, and which occur in obedience to definite physical laws; and *vital* expressive of such phenomena as are associated with the "vital processes of a part or parts of the animal economy, as irritability, tonicity, sensibility," &c. There are symptoms also or characteristics, which are external, presenting themselves to the vision of the practiced observer, of marked significance, leading to accurate conclusions, both as to diagnosis and prognosis, and not unfrequcntly suggestive of important questions in reference to pathology and therapeutics.

These, more or less of them, belong to the expression of the countenance, the aspect of the eye, the character of vision, the sense of hearing, and the *decubitus* or posture, which the patient may assume—in a word the general aspect, and condition of the body as obvious to the view of the practitioner.

Under the phrase *physiognomy* of *disease*, then we propose to treat of those symptoms, aspects or phenomena, that are associated with, or dependent upon some disarranged condition of the vital powers ; some existing pathological state of particular organs, or of the economy at large, and which, in most examples, are more or less distinctly obvious. It is not our purpose, however, merely to enumerate such symptoms in the order in which they may present. We propose, in addition, to define their significance—their value as regards diagnosis, and, to

some extent, the conclusions deducible from them in reference to pathology and therapia.

The importance of such symptoms or aspects, as the exterior of the body presents, none will pretend to doubt.

"By a first glance at the general aspect of the patient, *a coup d'œil, d'ensemble,*" observes a learned writer, the experienced physician of quick perception and tact, derives most valuable information, and often recognises the nature of the disease, and ascertains the actual condition of the patient."

And with great propriety another remarks, "medical physiognomy is, in many diseases, a source of diagnosis which seldom fails the practitioner who is intimately versed in it, and we believe that much of that exquisite tact, in the discrimination of disease, which distinguishes some physicians, and which others can never attain, depends on the vivid perceptions of an eye and ear, habitually familiar with the lineaments, tone, and the gestures of disease." Now it is not difficult to describe symptoms, nor to enumerate appearances, in the condition of parts on examination *post mortem.*

The real task, the work of difficulty, the work of utility, too, is so to associate both the one and the other with actual conditions, either of vitality or of organs and tissues, as to make them available as signs of disease, and intelligently suggestive of the real nature of the exciting malady, as also of rational therapeutical measures.

Generally speaking, a florid aspect of the countenance, a flush of the surface, and redness of the mucous membranes, and especially of the prolabia, is indicative of abundance of rich blood. It leads to the conclusion that the appetite is strong, the process of digestion quick and energetic, and that of appropriation complete. With it, is usually associated a vigorous circulation—the pulse is commonly full, and characterised by a good degree of strength. In most examples, too, muscular development will be found to be ample, accompanied by proportionate physical energy—there are both strength and activity. Animal heat is well and equally developed and the processes of secretion and elimination healthfully performed. Again the intellectual functions ordinarily are in their integrity

—perception is clear, and the mind, in all its manifestations, acts with normal energy and coherence. On the contrary, a condition of palor, unless induced by some cause that gives rise to marked congestion, or active hyperæmia of transient duration, producing acute disease, is characterised by phenomena of an opposite kind. It evinces an abridged quantity, or an impoverished condition of the blood, and with it are associated irregularities in the circulation, diminished temperature, as well as inequalities, both in the development and distribution of animal heat. Digestion, in the greatest number of examples, is imperfectly performed, the appetite is defective, and often remarkably capricious, and assimilation, as shown by incomplete muscular development, partakes of the general debility. The action of the nervous system participates in the general malaise, which continued to a certain extent, (differing, of course, in different constitutions,) finally merges itself into established cachexy. Now, the intellect suffers, and not unfrequently the mind becomes well nigh obliterated—a condition approximating idiocy ensues, which treatment, whose influence is, to augment the quantity, and improve the quality of the blood, completely corrects. But these suggestions refer to the economy, in the first instance, in a condition in which the functions are all performed in due relation and with normal energy, and in the second, in a condition, if not of actual disease, that approximates it very nearly, and, often as we have seen, gives rise to consequences that entail upon the subject both physical, decrepitude and mental inapetency.

As a general rule, then, we deduce from the foregoing the following conclusions, viz.: that in the former, the sthenic diathesis is justly predicable, and in the latter the asthenic predominates. Again, when disease has supervened upon either the one or the other condition, whatever be the organ or tissue implicated, the grade will partake of the predominant diathesis. In the former, it will be characterised by excitement with strength; in the latter, by defective tone, though there be excitement. These positions, if conceded, lead us further to conclude that the treatment of disease supervening upon either condition, though the organ or tissue implicated, be the

same, and the assemblage of symptoms to which we attach the same cognomen, be identical, must, nevertheless, be remarkably different. We need not particularize—to reflecting minds it is sufficient, only, to indicate the principle. There are features, however, that belong more particularly to actual disease, many of which have their specific significance. Others succeed them, which indicate to the eye of experience, the subsidence of disease, or an abatement in its severity, and warrant the practitioner in declaring, either that it has begun to decline, or that convalescence has already taken place. Thus, extreme restlessness is remarkably characteristic of many forms of disease. It is significant of the extent to which the nervous system is implicated, but if attended with difficult or laborious respiration, as it not unfrequently is, it may point to the condition of the respiratory organs, as in Asthma, Phrumonia, Pleuritis, &c., or to the condition of the heart, as when some form of *organic* disease of the organ exists, or when deposition of serum has taken place into the sack of the pericardium, constituting hydrops, Pericardii, or to the state of the stomach, the intestines, or both, as when immense quantities of flatus are produced, giving rise to such a degree of distension, as greatly to impede the action of the diaphragm and respiratory muscles. Now, when any of these phenomena are present, the expression of the countenance is peculiar and characteristic. Other accompaniments are associated with jactitation, as violent pain, various and modified forms of gastric irritation, mental aberation, &c., and, in each particular example, the intrinsic significance of restlessness, as a symptom will be derived from a consideration of the principle accompaniment. If, then, the condition just spoken of, either individually, as a symptom, or associated with any of the phases above mentioned, in which case it becomes a sign of disease, be succeeded by a composed expression of countenance, or, in the language of Seibert, "any of the marked physiognomical rugæ," and, moreover, if the decumbence be unrestrained with a disposition to quiet repose, the practitioner may, with much propriety, pronounce favorably with respect to the result of his case.

With the "facies Hippocratica" doubtless most are to an

extent familiar, as also with its significance in reference to prognosis, and with it all *should* be familiar as regards its therapeutic suggestions. Early in his career, it engaged the attention of the 'Father of Medicine,' whose graphic description of its distinctive characters is as follows : "The nose is pinched, the eyes are sunken, the temples hollow, the ears cold and retracted, the skin of the forehead tense, glossy and dry, the complexion livid, and the lips pendent, relaxed and cold." Generally, the assemblage of appearances thus stated evinces a degree of extreme prostration, and points to immediate dissolution. We think, however, that this latter construction of its import is not true to the extent universally conceded. A distinction is to be made, in our judgment, as regards the stage of disease at which it occurs. Thus, if it appear, after disease has continued a considerable time, and especially after disorganization of some vital organ has taken place, we admit the full force of the accepted conclusion. Under all circumstances, we regard it as alarming in the extreme. If it present, however, as in certain forms of disease it does, in an early stage, and prior to disorganization, we think it less unequivocally portentous of a fatal result.

The importance of the above distinction, we think, will be readily conceded by the practitioner, since, if he can justly feel that this forbidding phase of disease is less ominous under certain circumstances than under others, he will not be so likely to abandon his patient to "Nature"—to the tender mercies of the ignorant and officious, or of hypocritical pretenders. In point of practice, this is of vast importance.

But we said it evinces a condition of extreme prostration. Considered therapeutically, then, it indicates the necessity, in all examples of severe disease, of unceasing vigilance in reference to its access, and the importance of an early and efficient resort to the most energetic yet appropriate stimulents. Absolute rest should be enjoined, and the horizontal posture scrupulously observed. No circumstance, whether in reference to physical or mental influences, should be tolerated by the medical attendant, that tends further to reduce the already exhausted energies of the economy. Hence, carefully watching

and intelligently treating the condition that gives rise to the expression of countenance now under consideration, the medical adviser, if our experience have not greatly misled us, will often have the satisfaction of restoring his patient to health and happiness.

To be Continued.

ARTICLE V.—*Fragments from Ten Years' Observation of Diseases in Michigan.*

The treatment of our endemic diseases is proverbially simple, and yet in its results a triumphant vindication of the utility and necessity of scientific medical research and analysis.

In reading the manifold treatises upon this subject, we cannot but wonder at the tortuous and devious path through which the truth has been followed, not because the truth is in itself obscure, but because the "traditions of the elders" have been received as guides instead of the great book of nature.

It is one thing to have eyes, but quite another to see. Dazzled by the great discovery of Cinchona, and especially of its prime constituent, Quina, as curatives in ague and allied diseases, the medical world has gone all agog in wild pursuit of other "specifics." We shudder at the fearful catalague of "substitutes for Quina," and groan in spirit at the interminable arithmetic of cases adduced in support of the hobby of the hour.

Meantime, the disease itself has been mostly lost sight of, whilst chasing an intangible, invisible, incomprehensible, mythic spirit of poison among the fogs of marsh districts, the clear air of sandy barrens, the east side of great and little rivers, highly cultivated farming lands, and far into the depths of the primeval wilderness.

We are gravely told of the chemical agencies which evolve the subtle venom from the soil to chill and burn the poor wretch who stands above it—we forget that the same agencies act upon *him* directly, and that the severity of philanthropy requires the utter exclusion of imaginary or hypothetical intermediates of cause and effect.

Ten years' careful observation and reading, *pro.* and *con.*, with us answers the inquiry, What is malaria? with simply, Nothing! It is a figment of fancy—a professional flourish—the title page of a book with blank leaves. "Antidote to malaria!" My dear, sir, the very quacks have got that in big letters upon the outside of their bottles of infernal mixture —I pray *you*, avoid it.

Varieties.—We recollect when the endless detail of forms of ague and modifications of remittent were wont to astonish the medical neophite. When we gave a diagnosis whilst stretched upon tenter-hooks ; when we firmly believed that the patient's temporal salvation depended upon our declaring and deciding unequivocally whether he was attacked with intermittent, remittent or "bilious" fever ; when we really believed with the fathers, that the size of the tree changed not species only, but even genus ;—we have long since practically discarded all this, but the false and loose ideas of semi-civilization will ever and anon startle us by lifting their gaunt forms alongside the clear body of truth—words without knowledge, distinctions without a difference.

"Strip nature naked to the skin,
You'll find about her no such thing."

Complications.—Turn to any text-book in print since the rags of chaos began to be collected into octavo volumes with leather bindings and gilt titles, and you will find every organ and tissue known or supposed in the body, quoted with an *itis* tacked to it, as concomitant to the endemic disease. The shower is so general that the wonder is that more of the drops don't hit.

This is due in great part to the crude idea entertained of the real nature of inflammation.

Diagnosed by certain symptoms, they have been mistaken for the abnormal state thus indicated.

The truth is, the pain, tenderness, functional disorder and perhaps general febrile action so much relied upon as determining the presence of local inflammation in endemic disease, are, in the vast majority of cases, utterly independent of the quasi-physiological process termed inflammation. Thus, gas-

tritis may be as closely simulated as was ever morbus coxarius in the hip joint of an hysterical woman. And so with a dozen others. The practical error is one which has converted what is really a disease of little or no danger into one of not unfrequent fatality.

At the present moment, the result of ten years' observation leans to the idea that inflammation is incompatible with the condition of the system whilst laboring under this form of disease. It happens that Physiology has advanced far enough to explain this fact, and the doctrine which the writer of this article set forth in 1848 has found a more able advocate in the pages of the transnctions of that venerable body, the American Medical Association, 1854, p. 627.

In tubucular disease it may be remarked, *par parenthese*, there is also absolutely a reverse condition of affairs. [*Vide Boston Medical and Surgical Journal*, Vol. LII., p. 29, by the present writer.]

Treatment.—Of the causes we have but little to say. The night and early morning air, rich in carbonic acid and damp with heat-depressing dews, are to be avoided. The "early to rise," of nursery rhyme, is to be discarded to the joint keeping of Blue Beard and Jack the Giant Killer.

Whatever locks up the hydro-carbon in superfluous excess in the system will determine the ague onset. The main thing is to *keep* well by proper regimen.

Cathartics are valuable only in so far as they depurate in milder cases, producing ordinary billious evacuation, but in graver ones dark *tany* stools. It is quite unnecessary to turn the patient wrong side out for this purpose. In many instances, indeed, no cathartic is needed. The so called typhoid condition, supervening upon remittent, almost invariably results either from excessive use, or badly selected cathartics. Many bad cases get well, simply by discharging the doctor and so stopping the alimentary intestinal scraping.

Emetics, *en passant*, we abhor from the soul *ab imo pectore*. The tendency to irritable stomach will be heightened by this emetic—fossil professors will call it gastritics or peritonitis, and the patient have to run the rusk of disease and treatment.

Venesection we have desisted from *gradatim*, but now urgently oppose. The bugbear of "complications" having proved a very infinitesimal quadruped, we find the lancet growing "small by degrees and beautifully less."

Opium and its congenes, for a similar reason, has steadily risen in favor. The hot head, full conjunctiva, and delirium even, now present no insufferable obstacle to its use, allay pain and distress, but meantime *depurate*.

Duration of the Disease.—Whatever the form of the periodic disease, whether regular or irregular, provided there is conviction of its nature and evidence that it sprung from epidemic causes, then it is a prime matter to wind it up. The idea that a so called remittent or billious fever must run longer than a simple ague is *only* behind the times. America's richest gift to the pioneer denies the implication. Impractical theorists may rail from colleges and publishing offices, but drop the owl cry of "complications," and it will be seen that the wnole family may bé brought up in the same way at a round turn.

The writer recollects when it was the general custom to ply the patient with evacuants and "alteratives" until the "fever changed"—that is, until symptoms of ultimate collapse came on, and then resort to large potations of Brandy and Quina. Nurses were valued aecording to their skill in determining when the fever was "turning."

It is hoped lhat has gone by—for it slew fearful numbers.

Better give the Quina, or its succedanea, even in the febrile condition, than to recur to the old mode. Ten years somewhat active practice has convinced me that even this is preferable to the former method. By banishing scholastic fears of opium, antimonials, &c., the Quina is always safe in our endemic disease. But they should be given in full, not meagre doses, and above all we have learned not to spoil the effect of the potent drug by inuring the system to its effect by continuance.

After checking the paroxysmal form, follows the part which tries us most fully. But its rules are so diversified that they

may not even be sketched in this already extended paper. Suffice it to say they are simply to restore the normal secretive and digestive functions—not by mere stimulants and tonics which are little worthy, but by carefully selected glandular excitants, and well considered requiem. We have ostracized seven-eights of our vials and galipot and powders. A.

ARTICLE VI.—*A Practical Treatise on the Art of Making and Preserving Microscopical and other Preparations.* By HENRY GOADBY, M. D., F. L. S., &c.

In the year 1851, during a long residence in Albany, N. Y., I was enabled, with the kind assistance of my esteemed friend John E. Gavit. Esq., Bank note engraver of that city, to carry out a plan that had long occupied my mind in relation to forming a less weighty, and more efficient tool for grinding glass.

Constantly traveling from city to city, the *weight* of my pewter plate, together with several pounds of Emery, was a very serious task upon me, whilst the want of a fixed residence prevented me from instituting any experiments whereby I might be relieved from the incumbrance alluded to. My desire was to convert emery, by the addition of another substance, into a hard, solid, compact cake of any required dimensions, and for this purpose I believed shell-lac to be the best material. My friend caught the idea, and proffered the assistance of himself, and his work-shops for the purpose of seeing what could be done. Our first experiment was successful, but clearly indicating that great improvements could yet be made. We used the ingredients respectively in various proportions; submitted the plates to different degrees of pressure, and lastly, we tried emery of different degrees of fineness. Without recording our comparative failures, it is enough to say that plates composed of emery, nearly 16lbs; shell-lac, somewhat less than 2lbs; subjected to a pressure of 5 tons, have answered the best. We have used in these plates with the greatest success, Flour Emery, number O, and Superfine.

The latter, cuts very fast. Of course, the emery and shell-lac can only be brought into contact by means of *heat*, and great care is necessary in melting the shall-lac, for, if the temperature be too high, or too suddenly applied, the shell-lac becomes like a mass of liver (decomposed), and you can do nothing with it.

Neither is it the easiest thing imaginable to knead so small a quantity of shell-lac with the large quantity of emery already stated. Success, however, depends upon this operation being well performed.

Subjected to *moderate* pressure, the plate will cut glass *incredibly fast*, but at the expense of the plate, which will wear nearly through in a short time.

The plates made under a pressure of 5 tons (in my occupation) have been used constantly and severely for five years without any sensible diminution. My desire to submit these plates to the severe test of time, and use, induced me in this, as on many previous occasions, to delay publishing any account of them, notwithstanding I once more laid myself open to the piracies of unprincipled and unscrupulous men.

These plates are round, some of mine as much as 10 inches in diameter, and from 5-16ths to 3-8ths thick. Although the plates were pressed between *two level metalic surfaces*, they yet require grinding to make them true; this is easily accomplished by means of superfine emery and plenty of water, and as in the course of time, and use, this operation requires to be repeated it is necessary to have two such plates, and as each plate possesses *two* surfacs, it is easy to obtain accuracy by grinding the sides interchangeably.

To use these plates for grinding, it is only necessary to keep the surfaces well wetted with water.

Unlike the pewter plate, the emery plate can be advantageously employed for grinding sections of bone, teeth, spines of echini, the sclerogenous tissues of plants, or fossils: in the former instrument, the loose, sharp cutting emery becomes impacted in the tissues *and never can be removed*, but in the latter, the emery is too tightly held by the shell-lac, and cannot get into any tissue. The only sensible wear is, not

of the *emery*, but in the shell-lac; and thus, occasionally, the plate will cease to cut, and the surface will be covered with a gummy something which keeps the glass or other material from actual contact with the emery—this is shell-lac.

If you now wash the surface of the plate evenly with alcohol, or Liquor Potassæ which is better, the shell-lac will be dissolved, and this should be well washed off with a copious stream of water—the well cleaned teeth of the emery will now cut sharper than ever.

When my friend had acquired, what the Yankees call "the hang of it" he made a batch of these plates (some 50 or 60) believing them to be important in many mechanical operations no less than to supply his own wants; some of these he intended to sell, and for all that I know to the contrary, they may yet be procured from him by those persons who have not the tools for making them, but would like to possess such appliances.

Hold the glass slide to be ground at an angle of about 45°, that *the outer line of the edge* may alone touch the plate of metal: grind by a quick, light, circular motion, until the line be straight and beveled; change the position of the glass to grind the *opposite* outer line in the same manner; now hold the glass vertically, and make the edge smooth. By beveling the outsides of the edge of glass in the first instance they are saved from breaking, which is inevitable without this precaution; it is true that beveling can be done at any time, but it is not easy to grind out the deep irregular holes caused by spliting the edge. In this way, the four sides of the slide are to be ground.

To keep the pewter plate, or emery plate flat, grinding should invariably be conducted all over its surface; but as this is somewhat difficult with small pieces of glass on a large surface of metal, I devote one side of my plate for slides alone, and reserve the other for purposes where the utmost flatness is necessary. Its flatness, however, should be frequently tested with a straight edge, and if elevations appear, they should be reduced by grinding them down. Optical glass grinders and other mechanics, who require a plane grinding surface, have three similar tools; when one of them becomes untrue by use, it is ground

with one of the others, until they present a like surface, neither of them true. Tool No. 1 being now ground with tool No. 3, the inequalities left by No. 2 are obliberated, and a flat surface is the result. As it would be particularly inconvenient for me to carry with me three plates each weighing 14 lbs. for the sake of keeping one of them true, I resort to another, but equally efficient plan: I take a piece of plate glass of the same length as the pewter plate, the width not being very material, with plenty of emery and water I grind the metal all over its surface with the *flat* side of the glass until they present a corresponding surface; if the metal be not sufficiently flat, I turn the glass and grind the other side: by this process the flatness of the metal may be insured; with the surfaces of the shell-lac and emery plates the correction, as before described, is very simple.

To abbreviate the time of edging the slides, it is expedient to hold one in each hand and grind them simultaneously; and although this may be somewhat difficult at first, a little practice will give all the facility, and tact, necessary for thus grinding *two* glasses in the time of one.

Cement for the Cells.—The slide being ready, the cell is to be cemented to it, and for this purpose a good, and water-proof cement is necessary. Canada balsam is too brittle; gum mastic is equally brittle and difficult to use, and I could not for some years find anything equal in toughness and durability to my own composition—gold size and lamp black—and I have now in my possession cells containing wet preparations cemented with it 20 years ago, every portion of which is perfectly sound. It is, however, in every respect, vastly inferior to the marine glue already alluded to. In the year 1842 my attention was directed to this composition by the newspaper accounts of experiments made with it at the Royal dockyards at Woolwich.

I consulted the patentee, Mr. Jeffery, and desired to know if it could be applied as a cement to glass; of this he knew nothing, and gave me some to try, and general directions how to use it. It failed; and for some months continued to fail, until the inventor made some specially for my use at the College of Surgeons, with which I had the most complete success. As made

for general use, the marine glue consists of different degrees of hardness, distinguished by numbers, from one, downwards; the particular composition made for me agreed nearly with the ordinary "No. 4." but as in addition to caoutchouc and shell-lac —the staple ingredients of the marine glue—this contained another and most important material, as applied to glass, it was agreed to call it "No. 4, G. K.;" subsequently the same valuable ingredient enters into the composition of every form of marine glue, so that "No. 4" is now a sufficient description of it.

Another and very beautiful preparation of the marine glue has been made in the United States, suggested by Dr. P. B. Goddard of Philadelphia.

It consists of caoutchouc dissolved in chloroform by the application of gentle heat to the consistence of a thick mucilagenous paste; then add clean, carefully selected tears of gum mastic, until the composition becomes sufficiently liquified to use with a brush, when it should be filtered to free it from the dirt, always combined with the gums in question. The gum mastic not only readily dissolves in chloroform, but it is somewhat curious fact that it should reduce the thick solution of India rubber to the condition of a transparent, lympid fluid; it must not be made too thin, however, for when dry it will be brittle from the excess of mastic. This is a very elegant cement; it can be used with or without heat, and when dry it possesses the great advantage of being perfectly colorless and transparent: I have not employed it for vessels of much size, but simply for shallow cells. The test of time, however, has been too severe for this preparation—it has invariably failed in every instance in which I have used it. The patent marine glue requires heat, and I have already described one mode of melting it; the following is the way *to cement the cells.*

To be Continued.

Burns.—In burns of the first degree, M. Stanislaus Martin strongly recommends that the injured parts should be covered with the white of an egg. By painting over the burn with several layers of albumen, a varnish is formed impermeable to the air, and possessing the advantages of collodion without its irritating properties.—*Bull. Therap. de Paris, Oct.*, 1854.

SPIRIT OF THE MEDICAL PRESS.

Reid's Method of reducing Dislocations of the Femur.

We have been requested by some of our subscribers, to publish a brief account of Reid's method of reducing dislocations of the *Hip Joint* ; urging, as a reason, the fact that many country practitioners have not access to any thing that has been written upon the subject, and that, should a case occur, they might have a ready reference to requisite knowledge in regard to this important discovery in Surgery.

We cheerfully respond to this request, and, in connection with Reid's published account of the principle involved, and his mode of operating, we publish, also, Dr. Gunn's explanation of the *modus operandi*, of the process founded upon dissection and experiment, regarding it as worthy of puxta-position with the *principle* enunciated by Dr. Reid.

PRINCIPLE INVOLVED.

The result of these experiments satisfied me that the chief, if not the sole difficulties to be overcome in dislocation of the femur, *and probably in all other dislocations*, consisted in the *extension* of certain muscles involved in the dislocation, and in their incapability of further extension without danger of rupture ; and that, in the case of dislocation of the femur, the difficulty lay in *the extension* of the aforementioned adductors and rotators, and that all traction, as already explained, on the dislocated bone, only increased this tension and could do nothing towards bringing it into place, except at the hazard of almost certain rupture of some of these muscles, or of fracture of the neck.

The method of operating is this :—*Place the patient on his back, on a low, firm table ; the floor or ground is better ; let the operator stand or kneel on*

the injured side, and seize the ankle with one hand, the knee with the other ; then flex the leg on the thigh ; next strongly adduct it, carrying it over the sound one, and at the same time upward over the pelvis, by a kind of semi-circular sweep, as high as the umbilicus ; then abduct the knee gently ; turn the toes outwards ; the heel inward, and the foot across the opposite and sound limb, making gentle oscilations of the thigh, when the head of the bone will slip into its socket with a slight jerk, an audible snap, and the whole limb will slide easily down into its natural position beside the other. In a recent case, the whole operation can be accomplished in less time than in can be described.

By this mode of operating, several important advantages are gained.

First. It is exceedingly simple, requiring no complicated fixtures, or display of terriffe engines to frighten the patient.

Second. We have the *consent of the will*, because the movements are natural ; in accordance with the mechanism of the joint, and with the functions of various muscles.

Third. There is little or no pain.

Fourth. Then comes to our aid that mysterious sympathy, by which flexors and extensors, alternately contract and relax, in accommadation to each other, under one and the same act of the will, and conquently we have,

Fifth. Neither tonic nor involuntary spasms to contend with, that is, in recent cases, and,

Sixth. This mode of operating is better adapted, and more certain of success, in cases of long standing, and is free from danger under all circumstances.

DR. GUNN'S THEORY.

Dr. Reid, in common with the profession generally, considers the muscles the agents which thus oppose our efforts at reduction, and his manipulations are conducted with a view to relax them, while the femur, acting as a lever, raises the head of the bone clear of the edge of the cavity. With this same view we have the directions of the books and public teachersto apply extension and counter-extension *slowly* and *uniformly*, in order to *tire out* the rebellious muscles. Blood-letting, antimony, and the hot bath are also called in to aid in this laudable crusade against these wicked organs.

"In this view, I would respectfully differ with Dr. Reid, the teachers, books and profession, and state my honest belief that the muscles oppose our efforts very little more than they do the progress of our earth in its orbit. This belief I have repeatedly verified by experiments upon the dead subject, and the members of the medical class of 1851-2 in the University will remember those conducted before them. A subject was placed upon the table, the lower border of the gluteus maximus was raised, and a scalpel carried through the subjacent muscles, and an opening made in the posterior and superior portion of the capsular ligament. The round ligamant was

then divided, and the head of the femur luxated upon the dorsum of the ilium. The usual indications of this dislocation were present. The subject was placed in the proper position, a counter-extending band applied to the perinæum, and fixed; the strength of two men exerted now upon the extending band, while endeavor was made to raise the head of the bone clear of the acetabulum with a jack towel, was insufficient to reduce the luxation. Reid's method of manipulation readily replaced the bone. This experiment was repeated many times, and uniformly with the same result. As *muscular action* could not have opposed our efforts and prevented success in this case, the question naturally presents itself, what structure stood between effort and success?* I answer, *the untorn portion of the capsular ligament.* In support of this view, let us consider for a moment the position of the limb at the instant of escape of the head from the socket during the process of dislocation. To do this we must bear in mind that force applied to the knee or foot while the limb is in a state of adduction, constitutes the most frequent cause of this dislocation. Force thus applied adducts the limb still more powerfully before dislocation takes place, and at the moment of the escape of the head of the bone from the socket, the limb is in a direction which crosses the thigh of the opposite side. Immediately that the head of the bone has cleared the edge of the acetabulum, it settles into its position upon the dorsum of the ilium, and the limb assumes the position and direction indicative of the accident. During the dislodgement of the bone, the superior and posterior portion of the capsular ligament is ruptured, through which the head protrudes; while from the position of the limb, at the instant of protrusion, the anterior and inferior portion is very much relaxed, thus allowing the head to rise easily over the acetabulum. As soon as the head settles into its position upon the dorsum of the ilium, the direction of the limb is changed, and the untorn portion of the ligamant becomes more tense, and for this reason the head of the bone cannot be readily returned to its place, till the limb is again placed in a position to relax it. Dr. Reid's method does this most effectually, and I conceive that any other plan which does not accomplish this, as for instance extension and counter-extension by the pully, or Jarvis' apparatus. in the usual direction, succeeds only by lacerating much more extensively, if not by actually tearing the ligament completely asunder, before the head of the bone will ride over the edge of the cavity.

"The principle, then, I would seek to establish, is this—*that in luxations of the hip and shoulder the untorn portion of the capsular ligament, by binding down the head of the dislocated bone, prevents its ready return over the edge of the cavity to its place in the socket; and thdt this return can be easily effected by putting the limb in such a position as will effectually approximate the two points of attachment of that portion of the ligament which remains untorn.*

* * * * * * * *

* Doct. Reid would answer, *passive* mascular fibres.

Further thought and experiment upon this subject have convinced me that dislocations of the hip joint *cannot occur*, except in certain positions, and these are positions of *very great distortion.* In support of this view, I would call attention to the great security against this accident provided by nature in the anatomy of the joint. The great depth of the acetabulum, surrounding on all sides the head of the femur, renders its escape nearly, if not absolutely, a physical impossibility, so long as the legs are parallel to each other, and on a line with the body. Fracture of some of the bony structures of the joint, would be the result of great violence, in this position of the limbs, but dislocation without fracture, I apprehend, never. Before dislocation can take place, the limb must be so distorted that the walls of the acetabulum will afford no longer protection against the escape of the head of the femur, the dislocating force throwing the head in this changed direction, against some portion of the capsule of the joint, which gives way before it, permitting the rupture of the round ligament, and the escape of the bone. It is evident that while the changed direction of the limb, throws the head wholly against some portion of the capsule, the opposite side of this capsule must be relaxed, and by its relaxation facilitate the riding of the head over the edge of the cotyloid cavity. Taking, for example, the upward and backward form of luxation, in my experiments, I have found it impossible, by my own strength, to produce luxation, even when the direction of the limb was changed to that which distinguishes this form of the accident *after* it has occurred, although the upper and posterior portion of the capsule, and the round ligament, were divided. In the course of my instruction during the last winter, I introduced the following experiment: A fresh, whole, and muscular subject was selected, and a circular incision was made around the middle of the thigh down to the bone; another, from the tuberosity of the ischium around the inner aspect of the thigh, and over the dorsum of the ilium to the point of commencement, and all the tissues cleanly removed from the bone and capsule of the joint. The upper and posterior half of the capsule was then cut away, leaving the anterior and inferior half, whole, and the round ligament was divided. In this state it will be seen that *all tissues* were entirely out of the way, (and could neither afford protection against dislocation, or impediment to reduction,) except the anterior and inferior half of the capsular ligament. I now placed the limb in a position which characterizes the dislocation upon the dorsum, viz: the knee in advance of the other, and the foot inverted; and the pelvis being fixed, I attempted to produce dislocation, but failed to do so, and I believe that no force, however great, applied to the knee, would be sufficient to accomplish the escape of the head of the bone without fracture of the acetabular walls, so long as the limb remains in this direction; for in this position the head presses *perpendicularly* against the superior and posterior portions of the acetabular walls. But on carrying the limb to a position in which the thigh crossed that of the opposite side, at a point just above its middle, slight pres-

sure was sufficient to dislocate the bone, for the acetabular walls, in this position presented to the head of the bone an inclined plane, while from the same reason of position the undivided portion of the capsule was relaxed, thus permitting the head to slide easily up this inclined plane and ride over the acetabular edge. At the moment, however, during which the head rested upon the edge of the cavity, this undivided portion of the capsule became tense, relaxed again as the head settled down upon the outside of the cavity, and upon dropping the limb down to the position which characterizes this dislocation, it became again tense. Efforts at reduction by extension and counter-extension in this direction were now made, but were unsuccessful, for this tense, undivided portion of the capsule bound down the head so that it could not ride back over the edge of the acetabulum; but on carrying the limb across the other, *to the position in which it was at the moment of escape*, the reduction was easily accomplished.

ART. VI.—*Observations on the Cause of the Diseases known as Sun Stroke.* By SANFORD B. HUNT, M. D.

As the season is now approaching in which we may not unreasonably expect to witness occasional cases of this sudden and terrible malady, it may be useful to recur to it now as a subject, in itself interesting, and especially so to those who have made its causation and pathology a subject of study.

The name "sun-stroke," or *coup de soliel*, implies that it is produced by the direct rays of the sun, and its pathology has been almost universally conceded to be a sudden and intense congestion of the brain sufficiently severe to cause immediate death. Based on this view of the pathology, the treatment has consisted almost entirely of heroic blood-letting, and the application of cold to the head.

Unfortunately no one of these propositions or theories is proven, and perhaps it is not too much to state that no one of them is correct. It is the object of this article to consider briefly the questions involved in them, and taking them one by one, to bring to bear upon them such light as is afforded by the copious statistical tables which emanate from the health offices of our principal cities. In conclusion, I shall endeavor to reconcile the facts of the disease so far as known, and suggest another theory of causation—one which I have already incidentally advanced on two or three occasions, but in which I have no especial claim to originality.

The first question for consideration is,

Are the direct rays of the sun necessary to the production of the disease known as sun-stroke?

Undoubtedly the larger number of cases occur in the open air, and in unshaded locations. But a very large number, so great as not to be considered exceptional, occur within doors or on cloudy days.

During the great *epidemic* of sun-stroke in New York, in August, 1854, of 235 deaths in that city from this cause, 49 were females. The argument here would be that as females do not live much out of doors, some, at least, of these occurred under shelter. This supposition is confirmed by the fact that Dr. H. D. Swift, in his valuable paper on "Exhaustion from the effects of heat"—a monograph remarkable for the intelligence of its pathological views—mentions that "Eleven patients were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility; and we had an opportunity of comparing their symptoms and lesions with those who became exhausted after laboring in the sun, but were unable to satisfy ourselves of any distinction."

Again, Dr. Reyburn, of St. Louis, in his "Report on the Diseases of Missouri and Iowa," made to the American Medical Association at its meeting for 1855, furnishes the following statement:

"The cases of the disease that occurred in the last summer were not all traceable to direct insolation; the furnace-tenders in engine rooms, and bakers unexposed to the sun, were sometimes attacked. One case is reported to us of a female who had not been out of the house during the entire of a very hot day, being attacked."

It is evident, then, that insolation is not essential to the creation of this disease, but that it may occur in shaded localities, and even on cloudy days, for Dr. Reyburn's statistics show that four deaths by "sun-stroke" occurred in St. Louis on the 5th of July; and on reference to Dr. Engleman's meteorological tables, I find that this day there was a very cloudy sky, with rain and thunder. Moreover this was not a very warm day, the mean temperature being only 79°. I shall have occasion to refer to this day again, with reference to another meteorological condition.

SECONDLY.—*Is congestion of the brain the special pathological condition present in this disease?*

It is only recently that the fact has been fully recognized, that in the great majority of instances of sun-stroke, the symptoms have been those of syncope or exhaustion. Dr. Swift, in the paper before alluded to, proves from both symptoms and *post-mortem* appearances that the latter is generally the true condition. Indeed, he says distinctly, that he has seen "a few, a very few cases, of insolation verified by a *post mortem* examination,—certainly not *one* during the past year, although examinations were made in *all the cases* in which we suspected any cerebral lesion." And he gives one case where a hot head, suffused and injected eyes, contracted pupils, swollen countenance, coma and stertorous respiration, with "fair strength" of pulse, all seemed to

indicate intense cerebral congestion; but after death none was found. So far as we know, the question of congestion of the brain rests rather upon the symptoms than the pathological evidence. In a case which we witnessed a few years since, all the symptoms of intense congestion were present. We bled the patient freely from both arms. Soon after the flow of blood commenced he passed into the most violent convulsions, which were only discontinued on the production of profound syncope. Yet the symptoms next day did not indicate that congestion had been present. His recovery was rapid, and we have always felt some doubt as to whether congestion were really present in that apparently well-marked case.

At any rate, enough is known to prove that contracted pupils and convulsions are not to be accepted as sufficient proof of congestion, and we must wait for actual *post mortem* evidence of it to verify its existence. It is already plain that only a very limited number of cases are congestive, and it is quite probable that that limited number will be much decreased on careful study.

Dr. Swift has more correctly given the name of "Nervous Exhaustion from the Effects of Heat" to the disease. The nervous exhaustion is proven, and it is also proven that the brain is rather anæmic than congested. But the cause assigned by Dr. Swift is not satisfactory to me, and I expect to prove that heat is not alone sufficient to act as a cause.

What are the facts in relation to heat as a cause of coup de soliel?

During the period of greatest mortality from sun-stroke in 1853, in New York, the temperature was, according to the register kept at the New York Hospital, not very high. During August, as we have already mentioned, 235 deaths occurred from this cause. It will be interesting to examine the weather record of this period. We find from it that the temperature at 3, P. M., the hottest hour in the day, was above 90° on three days only; on which it stood respectively at 92°, 91° and 90°. There were two days only on which it stood between 85° and 90°. There were five days on which it stood between 80° and 85°, leaving twenty-one days in this month of "excessive heat," on which the temperature ranged lower than 80°. With reference to insolation we may also note that twelve days were cloudy, and that it rained on eleven of them, the total amount of rain falling being large, viz.: 6.40 inches.

Turning to St. Louis we find that in the summer of 1854, during a period of nine days, (the last four of June and first five of July,) fifty-three deaths occurred from sun-stroke. The mean daily temperature of this period was 86°. Subsequently in July, another period of nine days occurred, the mean temperature of which was 88°, during which only seventeen deaths occurred. If temperature is the cause, why this disparity? Again four deaths occurred on the fifth of July, with a very cloudy sky, with rain and thunder, and a mean temperature of only 79°.

Here we leave the question of temperature. The facts adduced are conclusive that, though a certain temperature is necessary, neither the frequency or the fatality of the disease increases with a further rise of the thermometer. Heat, then, is not the essential cause: neither are the direct rays of the sun necessary.

What, then, is the essential condition for the production of coup de soliel, or rather exhaustion from the effects of heat?

I have been led to believe, from a careful survey of the premises, that a high humidity is the essential condition. This opinion is based upon weather records and upon analogy.

In the first place the condition of nervous exhaustion is never produced by a high, yet dry heat. The various experiments going to prove that a person may live and breathe without evil effects in a temperature high enough to cook a steak, or an egg, are too well known to need comment. Experimenters have borne for half an hour a temperature of 135°, without great discomfort.

No person, however, could live that time in a vapor-bath of that heat. The effect of surplus moisture in prostrating the nerxous system, impairing the vigor of the hearts's action, and producing syncope, is as well known as the vapor-bath, and needs no comment. The symptoms of coup de soliel, in its ordinary form, are precisely similar to prolonged syncope. The exhausting influence of a sultry day, or of a hot sun directly after a shower, are familiar instances of the effect of high humidity upon the system. But the proposition remains to be proven by hygrometrical observation, and not by the uncertain perceptions of the senses. I have purposely omitted to mention the hygrometrical condition of New York and St. Louis in the epidemics cited, because it was desired that the relation of *heat* in their causation should be tested by itself.

We may now, however, return to it.

Mr. Blodget (then of the Smithsonian Institution,) said of it (New York Journal of Medicine, Oct., 1853,) that "the temperature of evaporation at New York, at the time of greatest mortality in August, was from 80° to 84°, being higher than the maximum temperature of evaporation at New Orleans at any time in 1852, by 2°. Commenting on this point on another occasion, we made the following remarks:

"This implies, necessarily, a high fraction of saturation, and placing all the evidence together—the fact that the temperature at 2, P. M., was only 90° to 92°, (not an unusual heat for the season,) the cases were mostly among foreigners, that Dr. Swift describes the symptoms as indicative of 'nervous debility,' and not of 'cerebral congestion,' that the dew-point reached a tropical maximum, and the conclusion is irresistible that, not dry heat, but a long-continued bath of aqueous vapor was the true cause of this unparalleled mortality. But, as if to make the evidence irrefragable, we are told that 'eleven patients were attacked one morning in the laundry of one of

our principal hotels ;' and 'several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility.' I regard these last mentioned facts as of the last importance. Here, in a laundry, or in a sugar refinery, unaffected by solar rays, filled with vapor artificially produced, having an excessive humidity, unventilated (for on these fatal days there was no wind,) men fell by dozens in sudden death. The experience of all time contradicts the idea that dry heat can produce these effects, and I regard them as conclusive upon the question, whether or no the combination of high heat and humidity is of itself a cause of disease."

Turning again to St. Louis, we ascertain from Dr. Engleman's tables, that during the period of nine days before alluded to, the mean temperature of evaporation was 78 °, against a dry bulb temperature of 86 °. The fraction of saturation is high enough to prove the presence of an immense amount of aqueous vapor, nearly as much, in fact, as could be forced into the air without having it in the form of steam,

Without multiplying statistics, I may state that the examinations of such weather records, corresponding with periods of mortality from sun-stroke, as have fallen under my notice, has uniformly resulted in fixing a high temperature of evaporation as the efficient condition of the cause of the disease, and that without definite relations to the dry bulb temperature.

A question of much interest connected with this theory of causation, is as to what power a humid atmosphere exerts on the absorption of the solar rays. I made, last summer, some experiments, with a view to ascertain this point. So far as they went they seemed to prove that the difference between a thermometer in the sun and one in the shade, is greatest on days of least humidity. The observations were, however, made without sufficient precaution against reflected heat, and will be repeated during the present summer with care. The method of making them is to use four thermometers : 1st, one with a dry bulb ; 2d, one with a wet bulb—these two to be in the open air, shaded. A third thermometer should be exposed with a naked bulb to the sun's rays, while a fourth should be similarly exposed and wrapped around with black wool. Only clear days should be noted. In this way we hope to establish some relation between humidity and radiation, corresponding with that which is evident to the senses in the chill produced on going into the shade on a humid day.

Gestation Prolonged beyond the Natural Term by Homæopathic Means.—The *Gazette Hebdomadaire* of Paris, mentions, in a sarcastic strain, a little bit of Hahnemannian sorcery recently perpetrated in the French capital. Puerperal fever having been rife of late, many ladies, on the eve of parturition, were in great alarm; one, however, expressed herself with great confidence on the subject, saying, that her homœopathic attendant was giving her certain globules, by means of which her confinement would not take place at the accustomed period, but *would be delayed* until the epidemic had abated.—*London Lancet.*

Typhus Fever Treated by the Free Exhibition of Brandy. By Dr. Todd.

We have recently watched with great interest a series of severe cases of typhus fever under the care of Dr. Todd, in this hospital, in which an almost uniform plan of treatment, by means of the very free exhibition of stimulants, more especially brandy, has been resorted to with great success. Reflecting instructively, as these cases do, on one of the most important questions in the whole range of practical medicine, we hasten to bring their chief features before the attention of our readers. The series consists of eighteen cases; and as we cannot of course find space for the details of the whole, we will content ourselves by recording, by way of example, the particulars of a few of the more interesting, and append to them a brief synopsis of the rest. The whole having occurred within the last few months, and several of them within a few weeks, they present, we believe, fair specimens of the form of fever, lately and still prevalent in the Metropolis. They do not comprise, however, all which have been under Dr. Todd's care during the time referred to but only those of well marked typhus type, and which agreed in presenting the following symptoms previous to the commencement of the treatment:—A copious eruption of scattered measle-like spots (mulberry or typhus rash;) bowels either confined or but slightly relaxed; great prostration of strength; delirum (in six cases coma was present;) a small and very rapid pulse. It may be well to premise, that they were treated as is done in almost all general hospitals in the open wards, their beds being purposely arranged so as to occur at some distance from each other, in order to prevent the accumulation of contagious emanations. The treatment pursued consisted in administering, either every hour or half hour, day and night, from half an ounce to an ounce of brandy, with a draught every second hour containing sp. æth. chlorici mx., ammonia carbonatis gr. v., aq. pur. oz. The patients were induced to drink as much strong beef-tea as possible; the head was always shaved; and in most, a blister was applied to the scalp. We are indebted to the careful observations noted daily by Mr. Macnamara, the clinical assistant in charge of these cases, for the whole of the particulars respecting them. The first to which we shall allude was a very severe attack, and happened to an elderly and unfavorable subject; the beneficial effects of the alcoholic stimulant is strikingly shown, and there even appears some cause to infer the superiority of brandy over wine.

Elizabeth B., aged 70, was admitted June 16, 1853. She complained of severe headache, and of much pain in her limbs; was very deaf, and could see but very indistinctly. Her daughter stated, that the two latter symptoms had commenced four days previously, and the illness was of about a fortnight's duration, having begun with aching pains in the limbs and head, and great prostration of strength followed, after four or five days, by several successive shivering fits. Pulse 122; tongue thickly furred.

℞. Tinct. opli *m*xx. h. s. sumend.

℞. Sp. am. arom *m*xx., aq. pur. oz. iss 4its horis sum.

18th.—The skin of chest and abdomen is covered with an eruption of measly spots. The patient has been delirious during the night; her tongue is dry and furred; pulse 124; the bowels have acted but once since admission. Pt.

19th.—Has been very delirious; pulse 126; other signs as before.

℞. Am. carbon. gr. v., sp. æth. chloric *m*xv., aq. oz. iss. 3tis horis. Wine oz. viii. per diem.

21st.—Much worse; lies in an almost comatose condition, and allows her urine and fæces to pass into the bed. Pulse 130 The head to be shaved, and a blister applied. Instead of the wine, half an ounce of brandy is to be given every half-hour.

Rep. mist.

22d—Pulse 124. The half comatose condition still continues, and is only interrupted by low muttering delirium.

23d.—Pulse 120. The coma is passing off, and the delirium is less constant during its intermissions. The spots have now entirely disappeared from the skin. The patient takes her beef-tea much better than she did.

24th.—Pulse 114. This morning the head symptoms are much less severe; and on being questioned, the patient occasionally returns rational answers. The bowels act daily, but are not loose. To continue the same treatment.

25th.—Pulse 95. The skin for the first time is moist. The patient states, that she feels much better, and can be got to understand clearly where she is, which has not been the case on any previous occasion since her admission.

26th.—Pulse 90. To take half an ounce of brandy every two hours.

From the last date she continued to improve. To aid her convalescence, quinine and other tonics were administered. She was discharged quite well, six weeks after admission.

In the next case the progressive decrease in the frequency of the pulse subsequent so the employment of the stimulant, was equally well marked as in the above. It occurred in a much younger subject.

James E., aged 18, began to feel ill on the 26th of June; and on the 29th, was seized with shiverings, pain in the limbs, and great prostration of strength. He was admitted into the hospital on July 5; and at that time, the skin was hot and dry, and covered with the typhus rash. The ocular conjunctiva of each eye was red and congested, and the tongue brown and furred. Pulse 112.

Ordered ℞. Am. carb. gr. v., aq. pur. oz. iss ter. die. Beef-tea *ad libitum.*

July 6.—Pulse 120. The bowels have acted once to-day. Delirium was present during the night.

Rep. Mist.

7th.—Pulse 124, very weak. The delirium has been so constant that the nurse has found it impossible to induce him to take any nourishment. Rep. Mist. The head is to be shaved and half an ounce of brandy is to be administered every hour.

8th.—Pulse 120, still very feeble. Bowels act daily.

9th.—Pulse 112. The delirium is much abated, and the patient takes his beef-tea well.

11th.—Pulss 100, much improvement. The brandy is to be continued.

12.—Pulse 92. For the first time the skin is moist and perspiring. From this date the patient gradually recovered.

At one time, most of the members of an Irish family living in a dirty alley in the neighborhood were in the hospital together, all suffering from the same type of fever. The following case is that of one of the sons:—

John C., aged 15, admitted June 28th, having been seized on the 23d with shivering pains in the limbs, prostration of strength, and severe purging. He had, at the time of admission, the usual symptoms of fever, was very restless, and at times slightly delirious. The bowels were not much relaxed; there was loud rhonchus heard over both lungs. Pulse 116, skin hot and dry. To drink beef-tea

29th.—Pulse 118, very feeble. The delirium is increased. Half an ounce of brandy every hour.

July 1.—No improvement. Pulse 120, and very weak. The boy lies in a semi-comatose condition. Believing that the administration of the stimulant had not been well attended to, Dr. Todd ordered a special nurse for the case, and directed that the beef-tea and brandy should be regularly taken day and night.

2nd.—Pulse 100. The patient is less stupid and seems to understand the questions put to him.

4th.—Pulse 92. There is no delirinm present. The tongue is much cleaned and the respiration is unattended by any degree of rhonchus.

5th.—Pulse 80. The skin is moist. The brandy is to be given every two hours.

8th.—Is rapidly getting better. The brandy is discontinued, and two pints of porter per diem substituted for it. From this time the patient very quickly recovered.

Out of the whole eighteen cases but one terminated fatally. The subject of it was very violently delirious on the day of her admission, and no account of her previous symptoms could be obtained. Death occurred on the third day afterwards. On making the autopsy, the brain was found to be slightly congested, and the grey matter was of a darker color than usual. Peyer's patches in the small intestines were enlarged, and very distinct, but not ulcerated. The spleen was enlarged, full of blood, and very soft; but all the other organs appeared to be in normal condition.—*Med. Times and Gazette.*

On the Absorbing Power of the Intestines in the aldid stage of Cholera. By *Dr. A. Hirsce, of Dantzic.* Translated by W. Krause, M. D. Duchaussey, as many others, found by experiments on the external skin that its absorbing power is entirely lost during the latter stage of cholera. He applied sinapisms in a number of cases, which did not redden the skin, though left upon it above an hour. The skin felt cool and clammy, and was never seen to become hot and reddened. A slight rubefaction became perceptible, after the skin got warm, and persisted even when the skin became again cool. Vesicants did not produce blisters even in a single instance; the skin appeared either warm under the plaster, or somewhat softened. Huebbenet evinced the loss of absorbing power of the intestinal membranes, by chemical researches. He administered the ferro cyanate of pottassa per os, and never succeeded in detecting a particle of it after death, in the blood of the patient. A similar series of examinations made at the city hospital of Dantzic, during the epedemics of 1855, led to the same conclusion. D. followed another method, which, though less reliable, yet is worthy of noticing. He closely watched the effects produced upon his patients by active drugs, such as quinine, iodine, belladonna, nitrate of strychnia. He declares, however, the results of his observations uncertain with regard to quinine though it seems remarkable that a patient who took one hundred grains of quinine per os and anum, within forty-eight hours, did not perceive the least sign of its action during the algid stage. After, however, reaction had come up, and the urine was again secreted, the characteristic symptoms, especially buzzing in the ears, made their appearance. As to the loss of absorbing power of the external skin, the following experiment appears highly interesting: The back part of the forearm of a patient suffering with cholera, was painted over with tincture of iodine, the other side of the same arm with a solution of starch. Now, a strong current of electricity being directed to pass through this arm for ten minutes, not the least sign of the usual change in the color of the amylum could be observed. It seems further to deserve notice that the skin of the arm did not turn red, and the commotions of the muscles were out of proportion to the strength of the battery used. Belladonna was administered in all possible forms and ways, without any symptom of its physiological action. It is an interesting fact, which D. mentions on this occasion, that the pupils of a patient near dying, into whose veins a solution of extract of belladonna had been injected, dilated to their widest extent within three minutes. D. regards the occurrence as an important therapautical hint to the practitioner; inasmuch as the usual ways for therapautical agents, intestines and skin, being blocked up in cholera, there is another passage left, the circulatory apparatus, which seems to favor the speedy action of our remedies. The same negative results, as before, were obtained also with the nitrate of strychnia. It was administered through the mouth, rectum, and subcutaneous cellular tissue. D. was bold enough to exhibit one and a half grains of strychnia in a single dose.

He condenses the results of his investigations in the following propositions:

1. Patients in the algid stage of cholera have lost the power of absorption, no matter whether the medicament be administered through the mouth, rectum, bladder, skin, or cellular tissue. (D. did not examine if the same applies to the mucus membrane of the lungs.)

2. The absorbing power is restored again in moderate cases in the state of reaction; in very grave cases, not before the discharges are entirely arrested, urine is secreted again, and reaction fully established.

3. If the patient remains comatose, although the skin has become warm, and the pulse can be felt, absorption, as in the algid state, is found wanting.

4. Should, however, some absorption be observable (?), then it is so trifling, that no cure can be expected from the usual exhibitions of medicines.

5. It seems, therefore, quite useless, and sometimes even dangerous, to trouble the patient with active medication, especially since the doses, usually being increased, accumulated effects might be brought about, when the system begins to react.

6. If any internal remedy is to be tried in the latter stage of cholera, it must be given through the veins. D. had sufficient opportunities to convince himself of the favorable results of such treatment.

We shall mention hereafter some doubts which have justly been advanced against the conclusions drawn from the above observations, although it may be looked upon as a fact, that the skin and mucous membranes are deprived of their absorbing power during the algid stage of cholera.

It may perhaps not be improper to mention, in addition to the loss of absorption, some facts which serve to prove the loss of reflex action, after collapse has taken place. Buhl states that the muscles of the face do not contract when the face is sprinkled with cold water. The sphincter ani does not contract upon the introduction of a finger into the rectum; neither sneezing nor coughing can be produced by appropriate stimuli. As regards, however, the non-striated muscles, which are accessible to observation, the iris was seen in a state of moderate spasm, the pupil somewhat contracted, and sluggishly reacting upon light. Hutchinson, of Brooklyn, who made the same observation, pronounces this phenomenon a very unfavorable symptom. Pfeufer once applied atropia to the eye of a patient, whereupon the pupil dilated to its ciliary margin, and remained so for some time after the patient was dead.

Another doubt with respect to treatment arises from the consideration that there is no absorbing power of the intestinal mucus membranes, is, under such circumstances, any result may be expected from the treatment?

Brochin (*Gaz. des Hop.* 112, 1854,) answers this question in the affirmative. For there are not only passages for the administration of physic than the stomach and intestines, but we are neither able yet to determine whether and when the absorbing power is entirely gone, nor if medicaments, without

being absorbed, might not produce a desired effect by local action. The number of remedies, applicable to the last stage of cholera, is however much to be limited, a view fully agreed with by Vernois in whose clinics Duchaussoy made his observations. (*Gaz des Hop.* 115, 1854.) Also, the advice of See, to be careful in the repeated exhibition of large and increased doses during the asphyxic stage, ought not to be neglected, as very serious consequences may follow, when the system begins to react. See himself witnessed a case in which the patient became narcotized during reaction, many hours after the last dose of opium had been given. Gietl finally draws our attention to the fact that liquids which have been exuded into the intestines,are absorbed again during reaction. For the bowels are found to be empty, though the patient had no more operations by which the liquid contents of the bowels, previously ascertained by physical examination, could have been dicharged.—*Cin. Med. Observer, May.*

Notes on Tænia, with Fifty Cases Treated with the oil of Male Fern; by *Dr. W. W. Gull.* This indigenous plant, the *Lastsœa Filis mas* of modern botanists, has been known as a vermifuge since the days of Dioscorides. About five-and-twenty years ago its efficacy was confirmed by Peschier, of Geneva, in several hundred cases; but it does not appear to have attracted much attention in this country until noticed by Dr. Christison, in the "Edingburg Monthly Journal" for 1852. In the following year a paper appeared by Dr. Christison in that journal, giving the results of his experience in upwards of twenty cases, in all of which, without exception, the worm was discharged after a single dose. Dr. Gull's cases amply confirm the previous statements of Peschier and Dr. Christison, and show that an indigenous weed equals, if it does not surpass in efficacy as a vermifuge, the vaunted kousso of Abyssinia, the turpentine of America, or the pomegranate of the Continent. The preparation employed was the ethereal tincture of the rhizome, in doses of from one and a half to two drachms* in a mucilaginous draught, occasionally followed by a saline laxative; which last, however, Dr. Gull does not consider necessary. In all of Dr. Gull's 50 cases, as well as in many others treated by his colleagues, the remedy proved effectual. One patient has been laboring under tapeworm for eleven years, and had taken kousso six times. In 25, or one-half of the cases, we find the period mentioned which intervened between the administration of the drug and the expulsion of the worm. The average of all the cases was five hours and three-fifths. In 8 out of 20 cases the head of the worm was found. There can be no doubt, then, of the efficacy of the male fern as an authelmintic; but we still want information as regards the permanence of the cure which it effects. In 5 only of Dr. Gull's cases are we informed that the cure was permanent, whereas in 6 cases we are told that the worm returned within a short period.

With regard to the locality in which the patients lived, all came from the low-lying districts, on the south side of the Thames. As to sex, 27 were

*The dose appears large. In Dr. Christison's cases it did not exceed twenty-four grains.

females, 14 males, and 9 doubtful, but probably females; this would make 36 females to 14 males. As to age, 11 were under ten years, six from ten to twenty, 14 from twenty to thirty, 11 from thirty to forty, and 8 above forty. —*Guy's Hosp. Reports*, 1856.—*Medico-Chir. Review, April*, 1856.

The Treatment of Hæmoptysis—By *M. Aran*.—M. Aran agrees with those who entirely condemn the employment of blood-letting in the treatment of hæmoptysis, as it only temporarily arrests the bleeding, while it is dangerous, owing to the debility and increased susceptibility to the intercurrent affections it gives rise to. He has, for some time past, been engaged in testing the efficacy of the various hæmostatic agents employed in hæmoptysis; and in this paper he gives the results of his observations. He considers the essence of turpentine a most valuable remedy, gives it in doses of from 10 to 30 drops every hour, either in a spoonful of water, or mixed up with magnesia as a bolus. Marked amendment usually occurs in a few hours, and in from twenty-four to thirty-six hours the bleeding ceases. It is less suitable for young or plethoric subjects, with febrile action, than in weak, cachectic individuals, exhibiting atonic characteristics. Ergot of rye and ergotine are far less efficacious; but chloride of sodium, given in doses of 1 to 2½ drachms, proves very efficacious in some cases, and has the advantage of being always at hand. Among the astringents, tannin, and especially gallic acid, are to be recommended; the latter, while quite as efficacious, does not exert the same desiccating effect upon the tissues, or induce the obstinate constipation produced by tannin. As a mean does, M. Aran gives 15 centigrammes (a centigramme is 1-7 grain,) every hour or alternate hour. He has had little experience in the use of emetic and nauseating remedies; but, in three cases in which veratrine was employed, the bleeding ceased as if by enchantment. This class of remedies, indeed, would deserve to stand in the first class of hæmostatic agents, were there not others possessing like efficacy, and yet not giving rise to the painful nausea these produce. M. Aran has derived great advantage from the combined use of digitalis and nitre. In ordinary cases, he gives, in the twenty-four hours, 30 centigrammes of digitalis, and 1½ gramme (a gramme is 15 grains) of nitre, divided into four doses; but, in very severe cases, these doses may be very much increased, so that the digitalis has been given to the extent of 1½ gramme, and the nitre to 4 grammes, without injuriously affecting the action of the heart, while the effect produced on the hemorrhage has been remarkable. Its arrest never, however, takes place so suddenly under the use of these medicines, as when turpentine or gallic acid is employed.

In abundant but not immediately dangerous hemorrhage, we can choose among any of the above mentioned means. In extremely abundant hemorrhage, we must arrest the flow as speedily as possible, by agents which do not depress the powers of the economy too much, and which are not too slow in their operation. Neither ergot, acetate of lead, nor alum is sufficient to meet

the danger. Turpentine, gallic acid chloride of sodium, or nitre with digitalis, can alone be trusted; but the necessity of increasing the dose with the intensity of the hemorrhage may perhaps render the chloride of sodium, and especially the nitre and digitalis, dangerous, through the possibility of a production of a too great depression of the heart's action. It is, therefore, to gallic acid or turpentine that we must chiefly trust in these severe cases; and we must not limit ourselves to their employment, but also endeavor to procure a temporary arrest of the hemorrhage by ligatures to the limbs, and the application of ice to the chest, allowing the means employed internally to consolidate this temporary cure.—*Med. Tsmes & Gaz., Jan.*, 1856, *from Gaz. Hop.*, 1855.

Iodine in Asthma, Bronchitis, &c.—Inquiry has been made in several journals, as to the mode of operation of iodine and iodide of potassium, in relieving asthma, bronchitis, croup, &c. Decided relief of urgent symptoms has been obtained by the exhibition of a single dose, and in half an hour, which would appear to be too soon for its producing an effect upon the general system. We venture to suggest that its remedial power is mainly due to its action upon the throat in the act of swallowing the medicine; and we do so because we have been for several years in the habit of using iodine for these diseases as a local application. For the different forms of pharyngitis, catarrh in the head, ozena, croup, bronchitis, asthma, &c., we prescribe some form of iodine as a local application to the throat, the posterior nares and the bronchi. When the principal difficulty lies in the throat, within reach of a brush, we use Lugols' solution of iodine, the acrimony of which is obtunded by gum and sugar, or by making the solution in simple syrup, instead of water, and applying it with a brush. But in case the disease is principally seated in the bronchial tubes, the larynx, or the posterior nares, we use iodine inhalations. A small bit of cane, about five or six inches long, is charged with a few grains of iodine, and fine wool is inserted in each end, just enough to prevent the iodine from falling out. Free inhalations are made through this tube to relieve irritation in the air passages, and when it is necessary to apply the fumigations to the posterior nares, they are either expired through the nose, or the tube may be inserted with the nostril. This is a convenient instrument, easily prepared by any one, and may be always at hand ready for use.

On account of the greater success which has attended upon our application of iodine to the relief of certain diseases of the air passages, than upon the use of nitrate of silver, we were induced to try the experiment of passing a probang, armed with an iodine solution, into the larynx. We failed to accomplish the object, and attributed the want of success to our own bungling manipulations, until the discussions of the New York Academy of Medicine afforded us some relief from our dilemma, by its reports and discussions. It would appear now to be so difficult a matter, that no one need indulge in

self-reproaches on account of failure. Dr. Gluck, of New York, however, thinks he has discovered a certain method of operating, which he describes thus:—"I introduce the right index and middle finger, previously wet, together with the tube, (commonly No. 7,) convex in its middle part, and placed between the two fingers along the back of the hand, with its concavity towards the back of the hand, and projecting a little below the tips of the fingers, into the glottis, and lifting and bringing backwards towards the root of the tongue, and pushing the tube with the left hand, (previously held on the occiput to support the head,) into the larynx, I quickly withdraw the fingers and remove the wire, (which is somewhat shorter than the tube,) and push it further down in the trachea, in order to make the injection. I have succeeded in introducing the tube and probang in this way in all instances where I could reach the epiglottis, which can be felt perfectly by those who have long fingers." Even if this can be accomplished, with all the facility here indicated, it may be doubted wether injections into the bronchial tubes is in any case to be preferred to inhalations.—*Mem. Med. Rep.*

Of the Employment of Borax by Injections in the Diarrhœa of Children—By *M. Bouchut.*—It is well known how difficult it sometimes is to check certain forms of diarrhœa in young children, during the period of their first dentition. Two kinds of diarrhœa are met with amongst children at this age, the one symptomatic of organic disease of the intestinal mucous membrane, the other an idiopathic affection, catarrhal in its nature, sometimes proving fatal, yet leaving behind no appreciable lesion. In this last complaint it is that the *lavements* of borax recommended by M. Bouchut are so successful. The beneficial action of this remedy on the mucous membrane of the large intestine, is regarded by M. Bouchut as analogous to the good effects of borax on the mucous membrane of the mouth, especially in apthous affections. Borax has this advantage over other salts generally used in injections; in such cases it does not decompose in the syringe, it is not irritating, and it is alkaline. The following is the formula for the alkaline *lavement:*

Borax, drs. iv. to drs. vi.
Sugar and water, oz. vi.

If a larger quantity of borax be administered, it is necessary to increase the quantity of fluid, since the borax is not very soluble. M. Bouchut has used this salt in other intestinal maladies, as ulceration, but his cases are not sufficiently numerous to be conclusive.—*Dub. Hos. Gaz.*

Quinine in Hooping-Cough.—In some parts of Europe, after treating the preliminary stage of hooping-cough with emetics of ipecacuanha, emollients, and revulsives, quinine is generally relied on to complete the cure. It is given immediately after the fit, in order to give time for the remedy to act before the succeeding paroxysm. Other remedies commonly employed such as belladonna, assafœtida, sulphuret of potassium, coffee, cochineal, &c, do not seem to aid the curative action of quinine. All this may be received as

evidence of the existence of periodicity in connection with the disease thus treated, which is often the case, doubtless, in this county, also.—*Memphis Medical Reporter.*

NEW PUBLICATIONS.

How to Nurse Sick Children.—S. S. & W. Wood, N. Y.

Such is the title of a little book sent us by the publishers. For the past few years diseases of children have engaged the attention of the profession, and of the benevolent, to a much greater extent than formerly. Hence, Hospitals have been instituted for the purpose of studying and treating more in accordance with well established scientific principles, the diseases of this interesting portion of our species.

That these institutions might be productive of the largest amount of good, both to the suffering, for whose benefit they were designed, and to scientific medicine, the most competent medical men have been placed in charge of them, and, as a consequence, some of the most learned treatises of modern times have been added to professional literature. The royal infirmary for children, over which the learned West presided, and his instructive lectures on the diseases of infancy and childhood, may be mentioned as examples. Also, most valuable treatises have issued from the press of our own country, on children and their diseases—of which those of Dewers, Condie, and Meigs deserve honorable mention. But the author of this little work proposes to himself no other than the humble task of teaching "how to nurse sick children," and, in our judgment, who ever will take the trouble to examine it will concede that he has performed his task very acceptably. His precepts are practical—such as could emanate only from a mind thoroughly imbued with the lessons of experience.

Addressing nurses, he observes, "first, however, I must remind you that the *nurse* is not the Doctor; that she never can be; that if she forgets her proper place, and tries to interfere with his duties, or to set herself above his directions, instead of being a blessing, she will be a curse; instead of promoting the sick child's recovery, she will very often hasten its death."

In this little book the nurse, for whose instruction especially it was penned will have a fund of practical instruction. The practitioner will learn much in regard to the significance of a large portion of the general symptoms, that characterise the diseases of infancy and childhood.

We, therefore, cordially recommend it to the consideration of all whose duties lead them to the treatment and nursing care of the young. For sale at Raymond & Selleck's, in this city. K.

The Treatment of Aneurison of the Arteria Innominata—by Ligature of the Right Common Corotid Artery. MONTREAL, C. E.

We have just completed a careful perusal of the anonymous monograph, whose title is thus announced.

Aneurism, whether true or false, or, in more modern nomenclature, traumatic or spontaneous, and whatever the artery implicated, has, at all times, been regarded as a malady of fearful import. Its causes and pathology, in the true or spontaneous variety, have given rise to much profound research, and learned discussion.

Among the various forms of the disease, those are necessarily most alarming and least amenable to the science and skill of the surgeon that invade the large arteries within the cavities of the chest and abdomen. The best mode of treating these, both therapeutical and surgical, has commanded the energies of the most learned, and the results of their labors are before the world.

The archieves of surgery have treasured the cases on which operations have have been made, the progress of each and their termination; and pathological anatomy has not failed to record the effects, not only on the part diseased, and the part operated upon, but on such viscera as from their proximity or sympathy, or their immediate vascular connection have suffered secondarily, and whose lesions are believed to have been the cause of death.

In connection with the treatment of aneurism of the Arteria Innominata questions of grave import arise. To the consideration of these, the writer has devoted much attention, and to them he has applied the powers of a thoroughly disciplined mind. That question which involves the propriety and utility of tying the common carotid, he has analysed with critical attention, and the conclusion to which he has arrived seems based upon accurate, pathological investigations, and, therefore, plausible.

As regards the propriety of the operation in those cases in which there is "iminent danger from external rupture of the sac," or of asphyxia from pressure upon the Trachea, we fully concur with the views put forth by the author, viz: "From the inferences of the foregoing discussion, it may be concluded as a secondary deduction, that there exists abundant justification to warrant a surgeon, in again, (i. e., as we understand it, operating, notwithstanding previous results) "treating innominatal aneurism by ligature of the right common carotid artery; nay, more, that in certain cases, he would be deserving of censure, if he permitted his patient to die without having been afforded the benefits of the operation." Momentous consequences may depend upon a little protracted existence—the settlement of an estate, provision for ofispring, or the performance of some important official duty, &c. The case he has narrated in the detail of its history, progress and final treatment—its termination and pathological developments, both those which

belong to it intrinsically and those that may be regarded as consequences of the operation—is of remarkable interest to surgical and pathological science. Moreover, it would seem to confirm the deduction of the author as expressed in the above quotation.

As guides to any who may be so unfortunate as to meet this most formidable malady, we transcribe the following propositions :

First—Cases most suitable (for operation:)—those of uncomplicated innominatal aneurism.

Second—Cases imperatively requiring :—Innominatal aneurism, with imminent danger from external rupture of sac, pressure on Trachea, &c.

Third—Cases most favorable :—When the aneurism proceeds from the left segment, or anterior circumference of the artery.

Fourth—Cases less advantageous :—Those in which the external tumor is nearest the middle of the Clavicle.

Fifth—Cases contra-indicating :—Complications with aortic aneurism, aortic disease, &c., unless excepted by extreme urgency.

Finally, we regard the work as a valuable contribution to surgical science, and worthy the *signature* of the author, which, for some reason, has been withheld. K.

Head-aches—There Causes and Cure.—By Henry G. Wright, M.D., M. R. C. S. L., &c., Physician to the Pancras Royal Dispensatory. S. S. & W. Wood, publishers.

Of the maladies to which "flesh is heir," perhaps few are productive of more suffering to the patient, or anoyance, and not unfrequently disappointment to the physician, than are those, treated of in the Manual before us. A full, scientifically arranged, and well written treatise on Head-aches, was, therefore, a desideratum. We have always deemed those works, which are devoted to a single disease, or a class, of more value to the student, as embodying more copious researches than what are denominated systematic treatises—such as proposes to embrace the whole of a department of Medical Science. Such, too, would seem to have been the judgment of the profession for a long time. Hence, we hear numerous invaluable works on Fevers, not merely modern, but extending far back in Medical Chronology. So, too, on other diseases, or such as invade a particular organ, apparatus, or function.

Of Monographs, whose advent belongs to a period somowhat early in medical history, perhaps none deserve more honorable mention, or have acquired and sustained a wider reputation than "Jone's Treatise on Hæmorrhage," and that of "Roels on Diabetes."

How completely has almost the whole of Medical Science been changed by the researches of "Lænec on diseases of the Chest?"—how much of good has resulted, exceeds all calculation. But we forbear to particularize further, the examples above instanced are sufficient to illustrate the general principle.

Dr. Wright has divided his book into two parts—the first treats of the varieties and symptoms of head-ache; the second of the causes and treatment. The former seems to be arranged with due regard to true pathological conditions, as nearly as can be in the present state of that department of our science. The latter offers a satisfactory explanation of the various causes of the disease of which it treats, and of the manner in which they exert their deleterious effects; while the system of treatment advised is in accordance with an enlightened therapeutics—the application of remedial measures not head-ache, in the abstract, but to the actual condition of the economy, having due regard, both to the diathesis, the causes, and the pathology.

To the enterprising publishers we tender our thanks for this addition to our library, and cheerfully recommend it as among the most valuable monographs that has fallen under our notice. For sale at Raymond & Sellecks.

K.

A Disquisition on the Ancient History of Medicine; comprising critical notices on the origin of Medical Science, &c., by Thomas L. Wright, M. D. Published by C. F. Bradley & Co., Cincinnati.

This is a work of no ordinary interest; whether however, all will concur in the views of the writer, in reference to the intrinsic powers of the human mind, at different and remote epochs in the world's history may well be questioned; whether too, in this age of supposed progress, when the present and the future alone *seem* worthy of respectful consideration, his manifest veneration for the past and regard for the good and great of antiquity may not be deemed by many as savoring quite too much of inveterate fogyism—the hackneyed approbrium of the present day, we leave to be determined by those who have time at command, and possess the kind of taste that qualifies the mind for such investigations. That the lessons derivable from history in all departments of human knowledge are too slightly estimated at the present time, but few who think soundly, it is believed can pretend to doubt. That a blind reverance for the past, without one inspiring confidence in the present, and events of the future, would constitute the most odious form of apathetic conservatism—tending to retrogade rather than advance, is not less to be doubted. Most assurediy that is the course, best calculated to *enlighten*, and give certainty to *progress* which, eschewing equally, *unlimited* confidence either in the *men* or the *science* of any particular age that has preceeded us on the one hand, and a rapturous and fanatical esteem for the present and future on the other, appropriates to the best advantage, the lessons with which history teems. Whatever may be the estimate in which Dr. Wright's disquisition is held by the profound worshippers of past ages, or by those, who ignoring the learning and skill of generations remote in the great reservoir of history—confide only in what is present and what may be in times to come, *we* regard it as of great value to all who

desire accurate knowledge in reference to the origin, the successive, improvements and final construction of medicine as a science. It is written in an easy and agreeable style, the eras that mark undoubted advancement, are explicitly stated, and the estimation in which our profession was held by kings and princes, as well as by cities and countries, is candidly and eloquently portrayed.

We wish the author all the credit to which a meritorious production ought to entitle him, and the publishers the full quoto of profit that is ordinarily awarded to enterprise, industry and skill. K.

EDITORIAL ITEMS.

Cholera Infantum.

In the last number of the American Medical Gazette, we find the following abstract from Dr. James Stuart's prize essay on Cholera Infantum:

Cholera Infantum.—"When the disease is fully formed, mercury becomes indispensable in its management, and the best form is calomel. It should not be given in large, purging doses, which only irritate the mucous membrane, while it passes off without producing any other effect than increasing the secretion which it is one object to restrain. From the TWELFTH *to the eighth* of a grain should be administered every two, four, or six hours, intimately combined with some inert substance, as fine sugar. Medicines, it is well known, will often act with more efficiency when minutely divided; and calomel, in this disease, will be found to be far more effective in producing its specific action when carefully divided by being rubbed and well mixed with the purest sugar. The combination should be reduced to the finest impalpable state, and in this condition made into syrup with water. Calomel is especially useful in the first stage of the disease; at a later period, when the evacuations have become excessive, and inflammation and ulceration exist, it will pass with the evacuations, and produce no effects on the liver."

As yet, we have not been so fortunate as to have access to the whole of this prize essay; but if we may judge from the above abstract, the subject has been treated by one familiar with the characteristics of the disease, entertaining sound views respecting its pathology, and has indicated the most rational treatment. In this opinion we may be biased by too limited observation and experience; but our uniform success in the treatment of Cholera Infantum, by the use of small doses of

Calomel, will continue to strengthen our faith in its potency and value, until we meet with the first case (that can reasonably be pronounced curable,) in which it has failed.

In its administration, however, we have a decided preference for giving it in the form of powder, rather than "making a syrup by adding the sugar and water." There can be no objection to the syrup, provided it be sufficiently thick to suspend the particles of calomel and prevent precipitation.

A better mode, as we think, is to pulverize the calomel thoroughly with pure sugar, and drop it on to the back part of the tongue, giving after it a swallow or two of mucilaginous drink.

Moreover, we are not willing to concede that its "*specific action,*" and efficiency are limited to the first stage of the disease. No remedy in the whole catalogue of therapeutical agents (save the Lancet) has had a better reputation for potency, in reducing inflammation, than calomel; and if we admit its power in abating the quantity of fibrin in the blood—a very generally accepted doctrine—why is it not as appropriate at a later period of the disease? Large doses, we admit, would only irritate the mucous surfaces, and pass off without any other effect than to increase the secretion; but if we have been able to recognise the legitimate effects of this drug, when exhibited in the minute form, which the writer indicates, it will be found equally efficient in the *advanced* stages of the disease.

Dr. Reese, in commenting upon the above abstract, says that "the twelfth of a grain of calomel every six hours, never did, and never can produce any appreciable effect, any more than the same dose of sugar or sugar of milk." Now if the Doctor means that the twelfth of a grain given every six hours to an *elephant,* or a *horse,* even, never did and never can produce any appreciable effect, we accept the doctrine without a shadow of doubt. But if he will limit his experiments to the genus, "Homo," and specify any age subject to cholera-*infantum,* we beg, most respectfully, to dissent from the assumption.

The time has been, in the medical history of the West, when calomel and quinine were given in quantity ad libitum, regard-

less of Apothecaries Weight. This fact is pertinently illustrated in the following case :

In the month of March, Mr. M———, from Fort Wayne, Indiana, visited the town of P——, in the North Eastern section of the State of New York, for the purpose of marriage. He was married, and on the following morning was seized with a severe paroxysm of Ague. Dr. ——— was summoned, and finding the patient plethoric with symptoms indicative of considerable cerebral cogestion, drew a moderate quantity of blood ; when about to dispense his medicine, the patient enquired what he proposed to give him ? To which the Doctor replied, a *portion of calomel.*

Ah ! said the patient, " that's it exactly ! Calomel is an old friend of mine ; but, sir, how large a dose ?" From 12 to 15 grains, was the Doctor's reply. Pshaw ! says the patient, " that's folly—why my physician always gives me *three drachms*, and it does the work effectually." After a little badinage on both sides, the matter was compromised by accepting the prescribed dose, with the proviso that if the patient were not purged to his *entire satisfaction*, he should have the *three drachms*, or any other quantity that accorded best with his predilection.

It was taken—directions faithfully followed, and at the next visit, Mr. ——— did not fail to admit with emphasis, the potency of the dose, at the same time alleging that, either the calomel was better than any he had taken at the West, that there was something peculiar in the climate, or that his recent marriage had wrought some unaccountable change in his constitution.

In accordance with the accepted doctrines of therapeutics, a certain law of the economy prevails in reference to the action of particular drugs, viz. : that their specific effects are not in ratio to the quantity given. For example, in the language of the authors of the United States Dispensatory, Calomel has the peculiarity that its cathartic action is not increased in proportion to the dose, and enormous quantities have sometimes been given with impunity.

This fact is confirmed by the following, from Dr. Christison, viz.: "the largest quantity of Calomel given as a medical agent, at one dose, is three drachms, which was followed by one copious evacuation, and that not till after the use of an injection."

Many other examples might be adduced to illustrate this law respecting the action of remedies. Nor is it less true, that, during seasons that induce irritability of the mucous surfaces of the alimentary canal, the use of very minute doses of Calomel for *adults* has the sanction of the ablest writers, as shown by the following quotation from Wood and Bache, viz.: when the stomach and bowels are very irritable, as in cholera and diarrhœa, from 1-8 to 1-4 of a grain, may be given every hour or two, so as to amount to one or two grains in the course of a day." Season, too, unquestionably has a decided influence over the susceptibility of the system in reference to purgatives. So, likewise, climate, and the result of universal observation is, that during the heat of Summer, in the more temperate, and generally, in intertropical regions, much smaller doses of purgative remedies are required than under other circumstances of climate and temperature. Now, it is precisely under these circumstances of season and intense heat that the disease we are now considering, is rife; and it is during seasons of the intensest heat that it is most obstinate and fatal. Is it not the deduction of philosophy then, in view of the above considerations, that no other than *the minute* doses recommended by Dr. Stuart are appropriate?

In confirmation of the doctrine we thus approve, it will suffice to refer the reader to the writings of Condie, Wood and Meigs; the former of whom administers the 1-6 to the 1-8 of a grain, the latter the 1-10 to a 1-4, while Wood recommends the use of the 1-16 to a 1-4, so repeated that one to two grains may be given in the course of twenty-four hours.

In the early stages of the disease there can be no question that the dose should be given at shorter intervals, but in the more advanced period, it is more in accordance with the true principles of the pathology of the disease, and the condition of the patient to lengthen the interval. Acute symptoms have

passed off, and what is now desirable is to procure the *alterative* effect, which, we confidently believe, can be more certainly accomplished in many cases of Cholera-*infantum*, by the 1-12 of a grain, repeated at intervals of from two to six hours, than with larger doses. R.

Notes on the Biography of Dr. Mussey.

The Medical Observer for July contains a very correct steel engraved likeness, and a biographic sketch of the venerable R. D. Mussey, M. D. L. L. D. As a general principle we deprecate these ante-mortem examinations of the life, character and accomplishments of even the truly great men of our profession. Is the necrological page of our medical literature so meagrely supplied with material for biography, as to be driven to seek among the living, subjects for biographical memoir? Has biography been chosen as the prize, for worth and attainment—an incentive to stimulate exertion? Or is longevity reducing the table of mortality among our *great* men? Verily, times are not as they once were. Men are buried alive, that they may have a foretaste of biographic immortality.

But if the impatient "spirit of the times" can not wait for "the crowning act in the drama of life," and must therefore have installments, and revised editions, both wisdom and propriety, would point the pen of biographical sketch to the grey-haired sires, whose monumental record of professional achievements is almost complete. In such memoirs the *motives* are less questionable, for ambition and pride, satiated with laurels, have become only a laudable self-gratulation, tempered with becoming modesty. Taking this view of the case, we forbear further comment, and present a few items gathered from this sketch, and bequeathed to the profession.

Dr. Mussey is now 76 years of age, and possesses unusual capability of mind, as well as vigor and elasticity of body. As a physician and surgeon, he has long sustained a high rank in the profession of our country.

We learn from this sketch that he has kept no record of the number of his operations, except those of three classes, viz:—Lithotomy 52 cases, 4 deaths; Lithotrity 1, case successful; Strangulated hernia 40 cases, 8 deaths.

Varicocele 49 cases, by subcutaneous ligation of the spermatic vein, with not one bad symptom following, and it is believed that in the whole number a perfect cure was accomplished. Among his most brilliant and successful operations was the removal of the entire shoulder blade and collar-bone, the first operation of the kind, probably, ever performed. This was done in October 1837, and the patient is still living. In 1830 Dr. M. operated upon a young man for a large, bleeding nævus upon the vertex of the head—by tying in succession both carotid arteries at twelve days interval, and a few weeks afterward removing the tumor. He has made several fine and successful operations in plastic surgery, and within the last four years, has ligated at four weeks interval, both carotids, successfully for aneurismal enlargement of the arteries about the ear.

But it is seriously to be regretted that Dr. M. has not left for the profession a faithful memorial of his operations in surgery, and the observations of an eventful experience. R.

Dr. Samuel D. Gross, professor of surgery, in the University of Louisville, known to the profession as an eminent teacher, and author, has been appointed to succeed Professor Mutter. The faculty may well congratulate themselves on their success in filling this vacancy.

Professor Austin Flint has resigned his chair of Theory and Practice in the University of Louisville, and has accepted the chair of Cliuical Medicine and Pathology in the University of Buffalo.

Professor Edward Moore, widely known as a surgeon, anatomist and teacher, has been appointed to the chair of Surgical Anatomy, and Surgical Pathology in the University of Buffalo.

ALEXIS ST. MARTIN.—Our readers will be gratified to know that this "physiological wonder and unique specimen of the vis medicatrix Nature," is again among the circles of the literary and scientific, and, that there is a *possible* prospect of making the rare opportunity offered by the fistulous opening in his stomach, subserve further the purposes of science, and especially of practical medicine. We have been familiar with the case since 1833, through an intimate acquaintance with Dr. Beaumont, but can scarcely think otherwise than that pecuniary profit, is so controlling a motive, in the present enterprise that the real interests of science may be lost in the desire for gain. How competent his present guardian may be to study and bring to light the important and recondite principles that are connected with the process of digestion, and to make them available to the advancement of physiology, our limited acquaintance with Dr. Bunting does not enable us to affirm. Charity and an ardent wish to have this most interesting case appropriated to the best practical uses, prompt us to hope that the Doctor's qualifications are adequate to the task he promises to perform. We find in some of our exchanges doubts indulged with regard to his attainments in science, and particularly in that of chemistry, which certainly is of the first importance in all researches into the composition and powers of the gastric juice, and all that pertains to digestion. But in our judgment a comprehensive understanding of the doctrines both of physiology and therapeutics is no less essential to a successful practical application of such facts and principles, as a profound knowledge of organic chemistry, may derive from the opportunity offered by this living laboratory.

We repeat our hope that Dr. Bunting is competent to all this; we confess, however, we had our suspicions a little excited when he affirmed and with emphasis, that in some essential particulars Dr. Beaumont was in error. From our intimate acquaintance with both Dr. William and Dr. Samuel Beaumont, who is de-facto the *writer* of Beaumonts Physiology and Experiments, and having through their kindness been permitted to witness no inconsiderable number of the experiments, we may be allowed to say that it would require something more than the

ipse dixit of *one* man to convince us that Dr. Beaumont had suffered any errors to creep into his account of either the experiments he made or their results.

That further experiments may be instituted and principles deduced, extending the practical utility of this truly wonderful case, is probable; that physiological and therapeutical applications of the labors of Dr. Beaumont *may be* made, that were not made, is not less probable, and this is just what should now be sought. Whatever the qualifications of Dr. Bunting may be we readily admit that if the discovery of truth and diffusion of scientific principles be, the predominent purpose—if in a word the sordid element be made snbordinate to this magnanimous design, he can readily command the talents and bring to his aid all the appliances that are requisite, in foreign countries which he he informs us he intends to visit at an early day. The exhibition before the profession of this city, we are sorry to say, was not altogether satisfactory. Unfortunately, the Doctor seems not to have acquired sufficient influence over the man to control his action, and induce that personal care and sobriety, so indispensible to ready and well directed experiment.

A debauche, or over indulgence in any way, so changes, for a time, the state of the mucus membrane of the stomach, as to alter very materially its several processes. Such was his condition when presented—a fact which embarrassed the Doctor, and greatly disappointed many who were anxious to see and to learn.

In the further prosecution of investigations connected with this unique case, it is to be hoped, that those who have an opportunity will avail themselves of the occasion afforded by these irregularities, to study the pathological manifestations induced by such indulgencies. This is one of the advantages now offered, which ought to be practically improved.

So too, the therapeutical action of remedies in correcting these influences, and the progressive changes that take place in the transition from disease to health, certainly ought not to be overlooked.

In a well-written article in the June number of the Medical and Surgical Reporter, we find an error which should be cor-

rected. The writer remarks: "in fact we were told by Dr. Bunting that until the present time, three persons only had been admitted to the great privilege of witnessing the phenomena, of which Dr. Beaumont and Dr. Lovell, Surgeon General of the U. S. Army were two, and the other, I believe, was a physician in Washington."

This communication of Dr. Bunting to the writer of the article from which we quote, evinces remarkable carelesness on a point in regard to which, most assuredly he ought fully to have informed himself, since in Dr. Beaumont's preface to his "Physiology and Experiments," he gives the reader to understand that a very considerable number of distinguished gentlemen "had been admitted to the great privilege of witnessing the phenomena." The following is his own declaration: "I avail myself of this opportunity to make my grateful acknowledgments to Dr. Joseph Lovell, Surgeon, &c., (to whom I am under obligations for personal kindness and official exertions in affording facilities for prosecuting the experiments) to Professors Silliman, Knight, Ives, and Hubbard of Yale College, Dunglison of the Virginia University, and Sewall, Jones, Hendersons and Hall of Columbian College, for their unsolicited friendship, for the interest which they have taken in the experiments, and for the generous encouragement which they have given to the proposed publication. To Dr. Samuel Beaumont, of Plattsburgh, N. Y., I am particularly indebted for the assistance which he has rendered me, in arranging and preparing my notes for the press."

This communication of Dr. Bunting conveys the impression that while Dr. Beaumont was making his experiments, and preparing his notes, *he*, even, was but one of the favored individuals whom St. Martin generously "admitted to the *great privilege of witnessing the phenomena.*" Now it was Dr. Beaumont's prerogative to *admit*, not to be admitted, St. Martin being employed by him for the special purpose of making these investigations, detailed in his treatise. Justice, therefore, to the memory of Dr. Beaumont, calls for the assurance that he was neither selfish nor exclusive in the demonstrative exhibition of "the phenomena."

It is true, therefore, that not only the physicians of Plattsburgh, but many of the citizens, all of whom took a lively interest, both in St. Martin and in the experiments, were permitted to witness more or less of them.

The writer of the article from which we have quoted, observes: "Among the physiological questions which arose during the contemplation of the case, was this: 'whether the *appetite* of the man would be as thoroughly appeased by feeding him through this *extra mouth*, as *per vias naturales*, or whether the pleasures of the palate were to be regarded as essential to the entire satisfaction of the feeling of hunger?" This is a very appropriate question, and the writer will find it quite satisfactorily answered, we think, by a reference to Dr. Beaumont's 65th Experiment, page 216. He remarks as follows:

"To ascertain whether the sense of hunger would be allayed without the food being passed through the Œsophagus he fasted from breakfast time till 4 o'clock P. M., and became quite hungry. I then put in at the aperture 3½ drachms of *lean boiled* beef. The sense of hunger immediately subsided and stopped the borborygmus, or croaking noise caused by the motion of air, in the stomach and intestines, peculiar to him since the wound, and almost always observed when the stomach is empty.

This experiment proves that the sense of hunger resides in the stomach and is as well allayed by putting the food directly into the stomach, as when the previous steps have been gone through with. Not that I would deny the utility of the previous processes, in ordinary cases. Even the sense of taste is essential It is placed as a sentinel to prevent improper articles from being introduced into the stomach."

Thus the question is answered from positive investigation, not by "supposition rather than actual experiment." K.

Rara Avis ! !—Strange but true.—Professor Hunt, in the last uumber of the Buffalo Medical Journal, in speaking of the Buffalo University says: "It has now eight professors, all of them men of experience as teachers, *but none of them old fogies!*" Is there another such, on record?

Professor H. A. Ackley has resigned the chair of Surgery in the Cleveland Medical College. He has been the pater noster of this school from its organization, in 1843, and it will not be facile to find a man to fill the vacancy who will be so bold and successful, as an operator, or so zealous and popular as a teacher.

Disease of Detroit for two months, ending July 5th.

The month of May presented a slight increase in the rates of disease, in our city, over the month of April; and yet in comparison with the corresponding month of last year, there was quite a decrease in the general prevalence, or aggregate of disease.

The type of fevers was intermittent, and if there was anything noticable, as peculiar, it was a more than usual tendency to recurrence ; being more liable to return after breaking up the first attack, and requiring more of prophylactic treatment.

We have found the Tinct. of Calisaya sufficiently antiperiodic and potent, in arresting the paroxisms in most cases, but in the more persistent or intractible forms have been obliged to fall back on our "sheet anchor"—Sulphas Quinia—giving from three to five grain doses, in a strong decoction of coffee, and anticipating a recurrence.

In the early part of the month several cases of Dysentery were met with ; yielding to the ordinary treatment of opium, and Mercurial Alteratives, with external fomentations.

The tendency to local congestion which characterized the previous month, extended through May, manifesting itself chiefly in the organs of respiration, and apparently increasing the proclivity to convulsions in children, and the puerperal state. This tendency was successfully met, with active antiphlogistic measures.

We did not get our usual quota of the diseases of children, Croup, Bronchitis, Measles, &c., usually regarded as peculiar to the spring season.

The month of June added something of variety but did not much augment the aggregate of our diseases. The staple production of the climate—intermittents—continued without any abatement or modification, until the accession of gastric and intestinal irritation, incident to the elevated heat of summer. This change of programme gave us Diarrhœa, Dysentery, and Cholera-Infantum. There was nothing peculiar in the character or grade of the two former, being amenable to moderate treatment, so far as we have been able to learn. The latter,

however, seemed to prevail more than is common so early in the season, and associated a peculiarity which was observed in very many, if not by far the majority of cases—viz : A tendency to re-currence after abatement of symptoms, and apparent convalescence. The most successful treatment according to our observation, consisted in the alterative effects of calomel. Adding a few cases of scalatina, varicella, neuralgia, and acute rheumatism, together with the ordinary list of obstetric cases, and we have detailed the principle ailments for June.

R.

Professor Mütter of the Jefferson Medical College, Philadelphia, has resigned his chair of surgery on account of impaired health. He has been identified with this school for fifteen years, as a popular and efficient teacher. He will still remain associated with the institution by the honorary distinction of Emeritus-Professor of Surgery, conferred upon him by the Board of Trustees.

Trial and Conviction of William Palmer.—The steamer Ericsson brings the news of the termination of this trial, which has resulted in the conviction of the prisoner and his sentence to death. The trial has excited great public interest in England, owing to the social position of the parties, the circumstances of the murder, and the medico-legal questions involved in the case. Palmer is a surgeon, but his chief occupation appears to have been that of a bettor at races. He was charged with having administered repeated doses of antimony to his friend, John P. Cook, also a sporting character, with a view to prostrate his strength, and prepare him to be carried off by a final dose of strychnia After his death he rifled the pockets of his victim, and took from them the sum of £700. Cook died with well-marked symptoms of poisoning by strychnia, as testified to by Dr. Christison. A chemical analysis of the contents of the stomach was made by Dr. Taylor, who found therein antimony, but no strychnia. The trial lasted six days, and the prisoner was ably defended by Sergeant Shee. There was another indictment against Palmer, for poisoning his wife, and several proved cases of forgery, in which no action was taken.—*Boston Med. and Surg. Journal.*

Abstract of the Proceedings of the Ninth Annual Session of the American Medical Association.—Continued.

By cash received from Dr. Isaac Wood, being the balance in the Treasury April 30th, 1856	1,015 62
By cash received from Dr. Isaac Wood, being the balance in the Treasury of prize essay fund, April 30th, 1855	100 00
By cash received from assessment and the sale of transactions,	2,150 50
By cash received from Dr. E. L. Beadle, for the sale of transactions,	12 00
By cash received from Dr. Wm. Brodie, for the sale of transactions,	12 00
By cash received from Dr. A. March, for the sale of transactions,	24 00
By cash received from Messrs. Blanchard & Lea for the sale of transactions,	102 50
By cash received from Dr. Chas. Hooker, for the sale of transactions,	163 00
CR.	$3,584 26

SECOND DAY.

The Association was called to order by the President, at nine o'clock.

The minutes were read, corrected and approved.

The Secretary read the following communication, dated April 7, 1856, from the Secretary of the Ohio State Medical Society:

SIR—At the annual meeting of this society, held in June last, at Zanesville, Ohio, the following resolutions were adopted, and I was directed to furnish you with a copy of the same:

Resolved, That the resolution offered by Dr. Grant, (a member of this society, but not at this or at that time a practitioner of medicine, but a lawyer,) at the last session of this society, viz:—"That it is not derogatory to medical dignity, or inconsistent with medical honor, for medical gentlemen to take out a patent right for surgical or mechanical instruments," was offered at a time when many members had left for their homes, and is not, therefore, the sense of the society.

Resolved, That the said resolution is in direct opposite to the code of medical ethics adopted by this society; and, therefore, be it further

Resolved, That said resolution, offered by Dr. Grant, and adopted by the society, be, and is hereby rescinded.

The communication was ordered to be placed upon the minutes.

Dr. Gunn, of Michigan, moved that those gentlemen from Canada, who are here by general invitation, be admitted in a body, and be requested to take seats on the platform during this morning's session. Carried.

The following gentlemen complied with the invitation:

Dr. E. M. Hodder, F. R. S. Eng., Prof. of Midwifery and Diseases of Children, Trinity College, Toronto.

Dr. J. H. Richardson, M. R. C. S. Eng., Examiner in Anatomy, University of Toronto.

Dr. Norman Bethune, M. R. C. S. Eng., Prof. of Anatomy, Trinity College, Toronto, C. W.

Dr. Worthy Haswell, M. R. C. of Surgery, Eng.

Dr. A. K. Dewson, College Physicians and Surgeons, New York, Licentiate of Province of the Canadas.

Dr. Geo. Coatsworth, Medical Department University of Buffalo, Licentiate of Province of the Canadas.

Dr. John Tarquand, Woodstock, C. W.

In receiving them upon the platform, the President, Dr. Pitcher, said he was happy to be the instrument of celebrating the nuptials by which we effect a scientific re-union of the two members of the Anglo-Saxon race, which have so long been separated by the political relations, having their origin in the separation of the American colonies from the English crown.

Dr. Hodder, in behalf of his Canadian brethren, thanked the Association for the courtesy and kindness extended to them.

Dr. Gross, of Ky., read a report on "The Causes which Impepe the Progress of American Medical Literature." In conclusion, he submitted the following resolutions:

Resolved, That this Association earnestly and respectfull recommends:—1st. The universal adoption, whenever practicable, by our schools, of American works, as text-books for their pupils.—2d. The discontinuance of the practice of editing foreign writings.—3d. A more independent course of the medical periodical press towards foreign productions, and a more liberal one towards American; and, 4th, a better and more efficient employment of the facts which are continually furnished by our public institutions, for the elucidation of the nature of diseases and accidents, and, indirectly, for the formation of an original, a bigorous, and an independent national medical literature.

Resolved, That we venerate the writings of the great medical men, past and present, of our country, and that we consider them as an important element of our national medical literature.

Resolved, That we shall always hail with pleasure any useful or valuable work emanating from the European press, and that we shall always extend to them a cordial welcome, as books of reference, to acquaint us with the progress of legitimate medicine abroad, and to enlighten us in regard to any new facts of which they may be the repositories.

LAST DAY.

The Association was called to order by the President at 9 o'clock.

The minutes were read, corrected and approved.

Dr. Leide, of Pa., offered the following:—

Whereas, It is the object of this Association, in the award of Prizes for Communications on subjects appertaining to Medical Science, to encourage the progress of the latter; and as this result cannot be better attained than through original investigation and discovery,

Resolved, That hereafter an annual prize of ——— dollars be awarded for the best Memoir or Essay founded on original investigations of the author; and in case of no memoir or essay being presented worthy of such award, the prize money to be appropriated towards the expense of publishing and illustrating such memoirs as may be subsequently deemed worthy of an award.

The resolutions, together with the suggestions of the Committee on Prize Essays, as to whether any means can be devised to cause an increase of the number of essays presented, were referred to a special committee consisting of Drs. Leide, Wood, and C. M. Meigs, of Pa.

On motion of Dr. Gunn, of Mich,

Resolved, That any new medical institution not heretofore represented in this body be requested to transmit to the Secretary, with the credentials of its delegates, evidence of its existence, capacity, and good standing.

On motion of Dr. Bailey, of Ill., Dr. Davis, of Chicago, was requested to continue his observations on the changes produced in the composition and qualities of milk by pregnancy and menstruation; also the best substitute for the mother's milk when weaning becomes necessary, and report at the next meeting of the Association.

On motion of Dr Palmer, of Ill.,

Resolved, That the thanks of the Association be presented to the press of the city of Detroit, who have taken so much interest in reporting the proceedings of this meeting.

The Association then adjourned to meet in Nashville, Ten., in 1857.

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

VOL. 1. AUGUST, 1856. NO. 6.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Links connecting the Vegetable and Animal Kingdoms.—Continued.* By HENRY GOADBY, M.D., F.L.S.

The *calcified* preparation was magnified 300 diameters, whereas the animal cells, as shown in the figure, are so large that they were only magnified 200 *diameters*, and the drawing subsequently reduced.

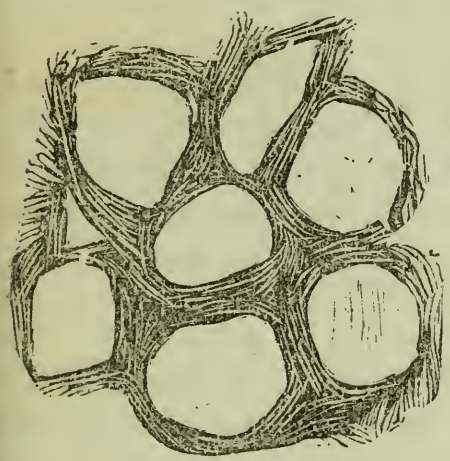

Fig. 45.

The common oyster shell is no less curious and instructive, when its calcified and de-calcified tissues are examined.

The composition of this shell is stratified, in a series of long, flat, prisms, such as are represented in fig. 46. We here see the prisms joined end to end, and forming a continuous layer, their lines of demarcation being distinctly visible. We have tried again, and again, to procure a *transverse* section of an oyster shell, but always in vain, in consequence of the great disposition

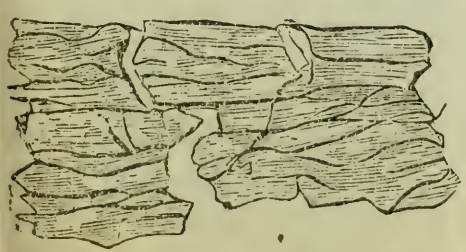

Fig. 46.

to split in the lamellar, or stratified direction. Gazing on this aspect of the shell, would any one have the least idea of the form of the animal cells, in which the lamellæ, or strata are cast? By de-calcifying the tissue, however, we have a view of a series of very regular and well formed cells, as represented in fig. 47. This, and the preceding figure, were subjected to the same magnifying power.

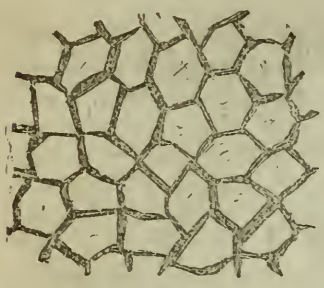

Fig. 47.

An egg shell, from its extreme brittleness, is very difficult to manipulate with: we succeeded, at last, in obtaining a very thin section, the microscopical appearance of which, is shown in fig. 48. In this highly calcified tissue are found a congeries of uniform, symmetrical cells, with a rounded mass of lime (apparently) occupying the centre of each cell. The cell-walls, are particularly definite, and appear, at first sight, to offer indubitable manifestations of the cells of *animal substance*. If we proceed to de-calcify the shell, we shall speedily discover our error, and find a most beautiful, and important tissue result, viz: the *fibrillation of fibrin*, (fig. 49.) Fibrin, in the Animal Kingdom, is altered *Albumen*. Albumen, (of which the white of egg is the most familiar example,) forms a constituent, no less of plants, than of animals, and is obtained by the stomach, in the process of digestion, or resolution of the food. The cells of animal matter in which lime is deposited, are usually formed of this material, and held in solution, it forms an important element of the fluid portion of the blood, (liquor sanguinis.)

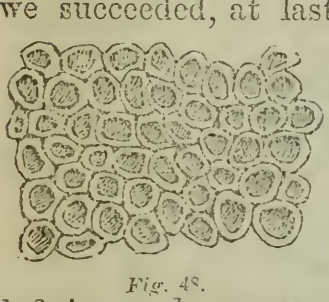

Fig. 48.

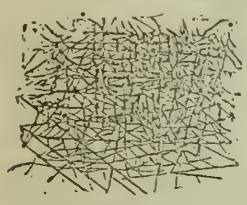

Fig. 49.

Its conversion into *Fibrin*, is less a *chemical*, than a *vital* process; and in this new form, it has a remarkable tendency to *fibrillate*, i. e., push out into fibres, not very dissimilar to the crystallization of a salt.

We possess a series of beautiful preparations on this subject, embracing fibrillation of the blood of many animals, down, even, to an insect, but are unwilling to introduce them in this con-

nection. The egg shell (so far as animal membrane is concerned) is entirely formed of such fibres, and the like is the structure of the membrane lining the shell, (membrana putaminis). The interstices, or meshes of these fibres, are filled with the carbonate of lime, by means of which the tissue is consolidated.

Ascending to the higher classes of animals, the vertebrate division, the structure of the bones claims our attention. In the class of fishes, we find true bone cells beautifully formed in the teeth of the Sharks, and Rays, the caniliculi of which are inordinately large, and extensively branched.

A bone cell always consists of a central lacuna, or vesicular cavity, and investing canaliculi (small tubes,) or, as they have been called, calcigerous vesicles, and calcigerous tubuli. These latter names were given to the structures respectively, from a supposition that the earthy matter of a bone, was elaborated in these vesicles, and tubes; the former designation is employed at the present time.

In a transverse section of the tooth of a Ray, (myliobatis), the caniliculi, (letters *a a*,) are seen of great size, and beautifully branched, arising from the dark, central vesicle. That the whole of this structure is *hollow*, is evidenced by its *blackness*, which indicates the presence of atmospheric air, shut up in cavities, it being a property of air, enclosed in narrow spaces, to appear very black under the microscope. A de-calcified bone of an osseous fish, presents a beautiful view of the animal cells, as shown in fig. 51. In this specimen, every atom of mineral matter has been entirely removed, and all that remains is as soft, and pliant, as a thin layer of cartilage.

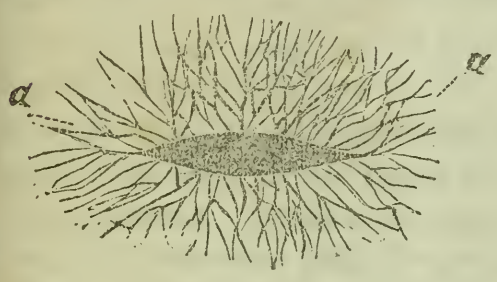

Fig. 50.

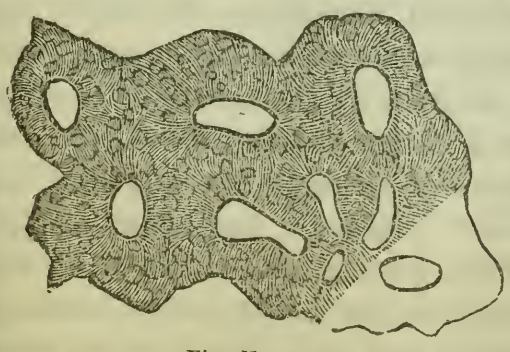
Fig 51.

In the still higher forms

of animal existence we find the skeleton, as in the insect race, consolodated less by the *carbonate*, than the *phosphate* of lime, although both these materials are found, in definite proportions, in the bones of man, and the superior animals.

In a transverse section of a human radial bone, fig. 52, we see a series of large, dark centers—these are transverse sections of *Haversian canals.* But, what are Haversian canals? We answer that they are a series of microscopical canals, running in the direction of the long axis of the bone; in function, they are allied to the large medullary canal, which composes the cavity in the shaft of a long bone, that is to say, they transmit blood vessels, (artery and vein,) and the remainder of their space is filled with a fatty substance, or medullar, or *marrow.* They are named from Havers, who discovered them. Around these canals, (in a transverse section,) are found *concentric laminæ,* formed, as will be seen by reference to the figure, by a peculiar arrangement of the bone cells, or lacunæ. The Haversian canals are everywhere connected, the one to the other, by the means of the bone cells, and their caniliculi. By their agency a circulation of *something* is maintained, throughout the entire substance of a bone; the Haversian canals everywhere connect with canliculi, these with vesicles, so that, by the agency of the bone cells, and their dependencies, a perfect system of hollow canals (infinitessimal it is true) connect these minute vascular, and medullary canals in one perfect system! But what do they transmit? It cannot be blood, for the solid particles, to wit, the colored and colorless corpuscles, are incomparably too large to pass through, even *the vesicles,* and these are gigantic, com-

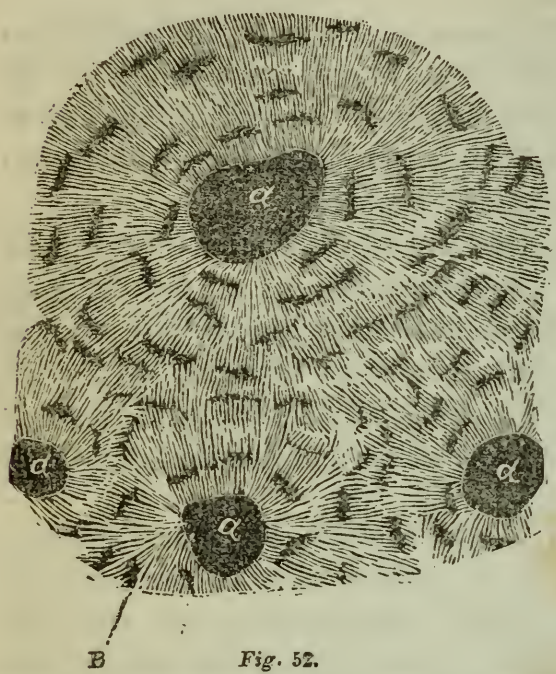

Fig. 52.

pared with the canliculi. Neither is it at all probable that the liquor sanguinis—a fluid of much density, by reason of its composition—could by possibility be transmitted through tubes and vesicles of such limited calibre. It is certain that a circulation of some kind exists, the difficulty is to determine of what description. Seen under any circumstances, no matter how recent, the vesicles, and the extremely attenuated tubes connected with them, are always seen *filled with air*; from this circumstance, we have sometimes thought that they were employed to transmit oxygen through the tissue. We know the fact that other tissues obtain oxygen from the blood that passes through them, but these, are *eminently vascular tissues.*

Bone, by no means belongs to this category; the single artery, and vein, contained in the Haversian canals respectively, would require to be connected with a *dense capillary plexus* to form a really vascular tissue, and in the place where these should be, we find the equally dense arrangement of bone cells.

We think it by no means improbable that the caniliculi communicating with a Haversian canal, approximate *to the artery* contained in the canal, from which *it obtains a modicum of oxygen to be transmitted through so much of the bone as lies between it, and the next Haversian canal.* That, like the blood circulating in capillary blood vessels, the oxygen deteriorates—becomes converted into carbonic acid gas, which is then *passed into a vein*, in connection with the caniliculi at the other end of the series. We have long held this opinion, but confess it is extremely difficult of proof, and feel we must throw ourself upon the negative testimony derived from the extreme tenuity of the entire apparatus, which seems to preclude the possibility of any kind of fluid being capable of transmission through them.

Under any circumstances, we hold the opinion that, the dense masses of the bone cells hold the same relation to this tissue, that the capillary blood vessels have to a vascular tissue; that in fact, they occupy the place usually appropriated by the capillary system. Moreover, we think the vessels of supply, and return, (the arteries and veins,) are as well proportioned to the number of bone cells in communication with them, as they would be had they to supply capillaries in a vascular tissue.

In fig. 52, *a* shows the Haversian canals, *b*, the vesicles, and *c*, the canliculi.

A longitudinal section of a bone is very interesting, and instructive, particularly in relation to the formation, and direction of the Haversian canals. Such a section is shown in figure

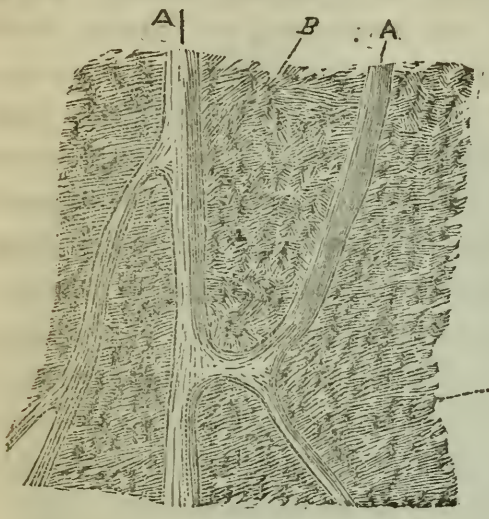

Fig. 53.

53, where *a* points attention to these canals, which although parallel to each other, frequently give off a branch. The study of this figure will account satisfactorily for the great variety in form, and size of these canals,, when seen in transverse section ; if, for example, the section embrace the upper or lower part of a canal, it will be nearly, or quite round ; but if it include the point of bifurcation, it will be a *long oval*, one portion of which is more robust than the other. The same letters apply to this figure as 52, viz : *a*, denotes the Haversian canals, *b*, the vesicles, *c*, the caniliculi, and *d*, the crutch of a canal.

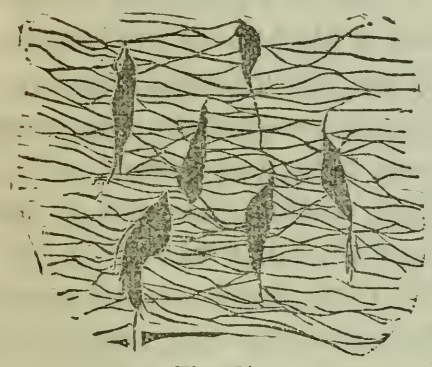
Fig. 54.

To show how impossible it would be for blood to pass through the delicate system of tubes we have described, a figure of this structure is appended, magnified 500 *diameters*, fig. 54. The vesicles are seen of good size, whilst the caniliculi are still remarkably attenuated.

Hitherto, we have only described the calcified bone, and all that we have yet seen represents simply, the mineral material of this tissue.

In the like tissues of other animals, we have shown, and described the double phase of bone, viz : its calcified and decalcified conditions. Let us now see if human bone be capable of presenting similar illustrations. For this purpose, we sub-

mit a thin slice of human radius (fore-arm bone) to the action of properly diluted Hydrochloric acid, and in a few hours we find that the earthy matter it originally contained, has been entirely removed.

We can now bend it, and double it up as we will ; it is singularly and completely elastic.

Notwithstanding we only submitted a thin slice of bone to the acid, now that it is de-calcified we find it much too thick for microscopical examination ; we therefore remove the thinnest section we can make with a scalpel, one side of which has been ground perfectly flat, and proceed to examine it. Of all the beautiful tissues of this kind, we have yet seen, none is so remarkable for its regularity, and symmetry, as the animal cells of human bone (fig. 55). Examined with a magnifying power of 300 diameters, compared with the like tissues that have preceeded it, how very minute it is. It is evident, therefore, that the size of the bone, or of the animal producing it, forms no criterion for the size of its animal cells, which rather seem to be evolved in *an inverse ratio*, the larger the animal, the smaller these particular cells.

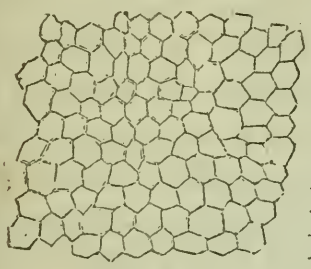

Fig. 55.

It has thus been proved, to a demonstration, that if cells be necessary in the class of plants, as the recipients of mineral matter, the rule suffers no exception in the animal kingdom. Moreover, we have established points of parallelism so perfect, as to be nearly, or quite identical. One further illustration of this kind just occurs to us : we are writing on a black walnut table, the center of which, displays a beautiful grain. It appears so pertinent to our subject that we have been fain to make a drawing of it, which has been reduced very much in the accompanying figure (56). Comparing this illustration, with fig. 44, which displays a longitudinal section of a spine of Echinus, we feel disposed to claim an identity *almost perfect!* Both

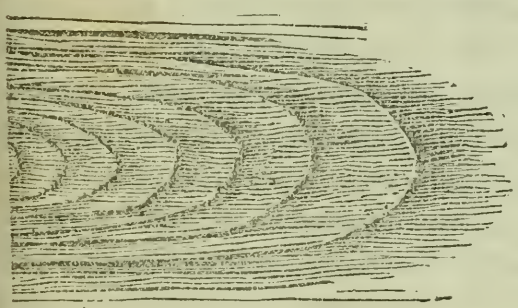

Fig. 56.

sections are *longitudinal;* each has evidently been increased by the constant addition of layers to the external surface, and both, seen in *transverse* section, offer characteristics which in no wise appear longitudinally; the more we compare them, the greater appears the resemblance.

However delightful this theme to ourself, we cannot afford to linger, especially as other, and fully as complete analogies claim our attention. Certain other cells in plants, in addition to those already described, are the recepticles of *Lignine*, or *woody fibre.* This particular material is above all things important in an economic point of view. To woody fibre, we owe the sails for our ships; to the same material the *cordage* of the same vessels ; without its assistance, we should lack a shirt to our backs, and look in vain for a mat, to wipe the dirt from our feet ! Nay, but for woody fibre, this, and its kindred articles had never seen the light, for the paper on which we write, no less than that composing our numbers, is wholly—*woody fibre.*

The value and importance of woody fibre, as applied to domestic manufactures, appear to have been well known at a very early period of the world's history.

We possess abundant evidence that the ancient Egyptians were as well acquainted with the properties and uses of flax, as we are. Like ourselves, they used it extensively in the manufacture of linen, to the total exclusion of any other form of vegetable tissue. The mummy cloth, in which the dead were encased, and of which such great quantities were used, no less for the mummified remains of Cats, the Ibis, Bullocks heads, &c., than for the needs of poor humanity, was all composed of *Flax.* Neither is this all. If the deceased chanced to be a King, or a Priestess, (probably, also, any very distinguished person,) a layer of beautifully *fine linen* was placed next to the body, as pure and as white as it was made—untouched by *bitumen* (liquid mineral pitch). This layer was not merely *comparatively,* but *really* fine, and compares favorably with manufactures of our own time. Commentators have been much puzzled concerning the " fine linen" spoken of in Holy Writ, and they have ventured to suppose that, as the period indicated was very remote the translation into this expression, was *unjustifiable*

—there could not, in fact, have been anything made in such early times, at all approximating to our ideas of "fine linen." We are the fortunate possessor of several specimens of mummy cloth, obtained from the tomb of the ancient King of Thebes, by far the earliest tomb that has yet been examined in the world.

To be Continued.

ARTICLE II.—*On the Silicification of Plants, and Animals.*

Perhaps no subject has ever been a greater puzzle to the scientific world, than that which constitutes the title of this paper. Botanists, Zoologists, Comparative Anatomists, Geologists, Chemists, and Natural Philosophers, have been equally at a loss to understand by what natural law, organic structures had become converted into *pure silica*, (Flint).

Twenty, or twenty-five years ago, we heard Professor Faraday deliver a brilliant lecture on this subject, to not less than 2,000 people, including men of the highest rank in the realms of science, in the lecture room of the Royal Institution of Great Britain; and after having completely, and to the satisfaction of all present, demolished every theory that had yet been propounded in explanation of this remarkable process, confessed he had *nothing new to advance in relation to it!*

Since that period, however, science has not been standing still, but on the contrary, has been steadily making *great* and *important* additions to our stores of information; so much has this been the case that, the present subject, in common with many others formerly deemed inexplicable, becomes *now* of ready solution.

We venture to assume that, the best mode of explaining obscure, and difficult questions in natural history, is to refer to kindred operations of nature constantly going on around us; and it is upon this principle we shall proceed, and hope to prove to a demonstration the correctness of our views.

It is a well known fact that a vast number of plants *develop silica in their tissues*—some in one situation, and some in ano-

ther. In some trees, the bark, in others, the upper or under, or both cuticles of the leaves, is the receptacle of this mineral. As a class of plants, the Grasses are pre-eminently distinguished for the great amount of silica that enters into their composition. The question naturally arises, how, and by what means do plants obtain this large amount of flinty material? Do they possess the power to *secrete*, and *deposit it?* By no means; the silica is obtained by the ordinary process of the function of nutrition—taken in by the root, elaborated, and recast, as it were, in a new and definite form, which is always characteristic of the species producing it. The difficulty is, how can the root of a plant act upon, and consume a solid flint? In truth, it does no such thing; the flint, of which so great abundance exists in the earth as to amount to 30 per cent., is firstly and elaborately prepared by a process of nature's own chemistry; one, too, which involves the doctrine of *chemical affinity.* As the earth contains silica, it also contains *potash*, and other alkalies; these have *great affinity for flint*, and they act upon, and *speedily dissolve it.* Science can so far imitate nature that, with the assistance of heat and potash two preparations of flint may be made—a *soluble* silicate of potash, and an *insoluble* silicate. Now nature, for her own especial wants, appropriates the *soluble* formula, as it must be largely diluted with *water*, e'er the roots can absorb—the plants feed upon it.

We refer to this part of our subject to no greater extent than will suffice to render us intelligible—the further consideration of it more properly belonging elsewhere.

Having flint reduced to a condition in which it may be *thinned* or *diluted* to any extent by the addition of water, it is easy to understand that pools of water may (as in fact they commonly do) exist, of which this *dissolved flint forms an element.* A tree, or a portion of it dies; or, an animal dies; either, or both, may be deposited in water thus compounded. In the case of an animal, the *soft parts soon decay*, and only the sclerogenous tissue, or bones remain. It is a curious but very harmonious fact that, the denser tissues of animals, and plants, are alike *nearly indestructible*; hence a bone, or the limb of a tree, would remain in water thus impregnated, an incredible space of time without

change, imbibing at the same time, a thin stratum of flinty matter, which forms a nucleus for any increase of quantity.

If the circumstances be favorable, a further volume of silica is given to the water, which in turn is increased by a subsequent addition, and so the process continues until *saturation of the organic substances*, results.

Frequently, no doubt, organic remains lie in water for a vast number of years, which contains too small a per centage of silica to be made available for the purposes of silicification—they are simply preserved.

To effect the saturation of organic substances with silica, one or two thousand years would at least be necessary ; simultaneously with the *increase of silica*, the water must necessarily *decrease*, and then must follow the ultimate drying of the tissues silicified, and more:

We have seen that nature forms the *soluble* compound of silicate of potash, but *silicified substances* are uniformly remarkably dense, and altogether *insoluble.*

At this point, we confess ourself at fault—we do not at all understand by what process this wonderful change is effected, and believe it to be a new problem for the chemist. We can silcify, artificially, anything that nature herself can convert; we can do more: her process is so slow that soft parts of animals decay—our process is so quick, that we can silcify *a brain*—in fact the *softer the tissue*, the easier we silicify it; but we cannot convert the soluble into insoluble solution.

We have never made direct experiments with a view to prove the fact, but we have long been of the opinion that *stagnant pools* of water, contain a variable quantity of *silica in solution*, and to this circumstance is probably due the siliceous organisms so abundantly found in such situations. H. G.

M. E. Fernet is experimenting on the comparative absorbing power of solutions of the different salts contained in the blood, of different densities and temperature, with regard to oxygen, nitrogen, and carbonic acids, or those connected with the process of respiration, both in animals and vegetables.

ARTICLE III.—*The Causes, Prevention and Treatment of Epidemic Dysentery, as it prevailed in the Grand River Valley, during the autumn of last year. Being the Report of a Committee appointed by the Ionia County Medical Society, June 10th*, 1856. By JOHN AVERY, M. D., *Chairman.*

In submitting this report the chairman has to regret, that members of the committee and profession did not more generally comply with the resolution of the society, and send in their local reports, from which we could have been furnished with a wider range of data and a more general expression of the profession in regard to the subject matter of this report. As it is, he has had to rely principally upon his own experience and observation of the disease as it occurred in his own immediate locality, aided by what he saw of it elsewhere, in consultation with other physicians, at the time of its prevalence.

For the last two years the tendency of diseased action has been downward. The high sthenic character of our inflammatory diseases, has given place to the low asthenic form; and the active, well defined intermittents of our malarious districts, have rapidly transformed themselves into the low continued or typhoid fevers. So great has this change been within the last two or three years, that instead of the majority of our fevers being simple intermittents or remittents, the practitioner at the present time, seldom meets with a case uncomplicated with some more serious form of disease. This change may be attributable, in part, to the gradual subsidence of the miasmatic influence, and in part to a specific cause, some particular disease-forming condition of the atmosphere. Another fact which has attracted with equal force the attention of physicians, is the strong tendency which has everywhere prevailed to bowel complaints.

At first this seemed to be an attendant upon other diseases, more or less frequent, and varying in intensity somewhat according to the constitution of the patient, or the locality in which he lived. During the winter of 1844–5, and the springs following, almost every other type of disease was lost in that of the typhoid. And the danger which most frequently threatened the patient, was the exhausting attendant diarrhœa. To con-

trol this, and sustain with appropriate means, his patient, until a favorable crisis should form, seemed to be the chief duty of the practitioner.

With the approach of warm weather, came the unmistakable evidences of dysentery, which was found in a gradual transformation of typhoid fever into typhoid dysentery. By the last of July or the first of August, this change was fully established, and dysentery prevailed epidemically along the course of the Grand River and its principal tributaries. Sporadic cases occurred in the country remote from the water courses, but were generally of a mild character, and exhibited none of the epidemic or malignant properties which characterized the disease in the immediate vicinity of the river. Low miasmatic districts, bordering on the rivers, suffered most severely, and those persons most, whose systems were previously debilitated by ague or intermittent fevers. Perhaps a larger proportion of children suffered than of adults, but they seemed to resist the disease equally well, and in proportion to the number of each attacked, the mortality seemed to be on the side of grown up persons.

The disease, as it prevailed generally through Ionia county, was characterized by extreme prostration from the commencement, such as, in very many instances, to require the use of tonics and stimulants from the first visit of the physician.

The attack was generally preceded for a few days by a sense of lassitude or weariness, pain in the back and lower extremities, costiveness, and a sense of fullness about the lower portion of the bowels. Sometimes, however, the attack proper followed upon a slight diarrhœa which had continued for two or three days. But this was not usual, and when found to have existed, was considered favorable in making up a prognosis of the case. In severe cases, the first two or three dejections generally consisted of scybala sheathed in mucus, but rapidly changing character, and in the course of twelve hours were found to consist of a purely liquid stool of much the appearance of beef brine. The countenance at this time, became dull, heavy and unexpressive; the surface generally of a dark color, and the capillary circulation almost entirely suspended. The

serum of the blood seemed passing off in the frequent and almost painless discharges which were rapidly prostrating the strength of the patient. The tongue was dark and dry; with sordes about the teeth, the surface cold, pulse feeble and irregular, low muttering delirium, or more frequently a peculiar absent condition of the mind, together with all the symptoms which indicate rapidly approaching dissolution, from the effects of a direct sedative poison acting through the circulation. In some localities, and in milder cases of the disease, these low symptoms were not constantly present; and the disease partook more of the ordinary characteristics of dysentery.

A correct knowledge of the causes which produced this disease is important, both to the public and the profession—to the public in order that it may be enabled to adopt precautionary measures in guarding against its recurrence; and to the profession, that it may prescribe intelligently the remedies best calculated to control it.

And first, there was undoubtedly some atmospheric cause prevailing during the autumn of last year, which in a greater or less degree predisposed all persons to an attack of dysentery. This acting upon the prevailing diathesis before mentioned, gave to the disease its destructive type. The latent agents which thus created the susceptibility to this disease, are of course little capable of explanation. Perhaps, however, such explanation may be found in part, by going back to the summer of 1854, which, as all are aware, was remarkable for its *drought*, its general health and failure of crops. The elements of nature, which eliminate the subtle agents of disease, were less active than usual, and evidently in some measure suspended in their operation. The rest which they then indulged in served but to augment their power, which a change of circumstances would again develop. For this, the wide contrast between the summers of 1854 and 1855 was fully adequate. Add to this, the effect of sudden daily changes of temperature upon the functions of the skin and circulation, and perhaps we have the only explanation for the increased activity of these agents of disease which our present knowledge of medicine will enable us to give. Local causes favoring this predisposition, without

doubt gave to the epidemic of last season that fearful mortality which marked its course in certain localities.

Among these causes we recognize the presence of malaria and its effects, as stamping with peculiar fatality the character of this disease. In those localities where ague and intermittents had been most persistent, the inhabitants suffered severely. The effects of this poison upon the system, in deranging all the secretions, impairing the quality of the blood, and in lessening the vital powers, are too well known to require to be enlarged upan; and are only mentioned here for the purpose of suggesting to all the necessity of avoiding, as far as possible, and of controlling in the incipient stage, all diseases which may arise from an exposure to this cause.

Irregularities of exercise and diet are, without doubt, exciting causes of this disease, and, as such, judicious care should be exercised in their avoidance during the prevalence of this, as well as all other epidemics. Exposures and excesses of whatever kind, as tending to relax the system and render it susceptible to the influences of cold, should be carefully avoided. The particular course of diet and amount of exercise a person should indulge in, we would not undertake to decide upon; but simply enjoin *temperance* in both. Vegetables and fruits in their appropriate season, and in due quantities and proportions are no small part of the natural food of man. But when used to excess, and ont of their season, they are unhealthy and often the exciting cause of disease—they were so, to a great extent, during the prevalence of the epidemic of last season.

Numerous cases came under the observation of different members of the committee which were directly traceable to the free and premature use of vegetables and fruits. Especially was this the case among children, whose greater fondness for this kind of food, and whose delicate organization and greater susceptibility, render them more frequently the victims of this disease. We do not wish to be understood as proscribing the use of ripe fruits and mature vegetables, but, on the contrary, believe their proper and judicious use is beneficial, as tending to promote a free and healthful flow of the secretions. The dan-

ger lies, not in their cautious use, in season, but in their excessive use out of season.

One practice in quite common use cannot be too strongly condemned, nor too carefully avoided; and that is the practice of "*cleansing the stomach*" by the use of purgative medicines and other equally injurious articles in the line of patent nostrums. During the prevalence of the epidemic of last summer and fall frequent cases occurred, which seemed to follow immediately upon the use of cathartic pills, taken for the purpose of preventing the very disease they proved instrumental in exciting. A much more convenient and decidedly more effectual method of guarding against an attack is rest, abstinence from food for the space of twenty-four hours, and thorough ablution of the body. Thus aiding the system, through the increased exhalations of the surface, in throwing off the poison imbibed, and without being over taxed by exercise or the efforts of digestion.

The almost certainty of this disease to run through a family, or even a neighborhood, when once it has made its appearance, has given rise in the popular mind to the very general belief that it is contageous, and, without doubt, under peculiar circumstances this may be the case. And it should suggest, both to the public and to the profession an important fact in regard to the management of the sick. Whenever a member of a family is attacked, he should at once be romoved, if possible, to a large and well ventillated room, apart from the rest of the household ; and all persons, save his physician and an intelligent and competent uurse, should be excluded. From this apartment all excrements should be quickly and carefully removed, and the room kept constantly and thoroughly aired. The anxieties of friends should be allayed by such assurances as the physician and nurse can give, from time to time. In this way much may be done to arrest its tendency to spread, and mitigate the severity of subsequent attacks, when they do accrne. For obvious reasons, these directions, in many families, cannot be complied with; but as near an approach to them as possible should be enjoined upon all.

Every source from which noxious effluvia can be generated,

should, as far as possible, be removed. All vegetables should be taken from the cellar as early in the season as the first of May, and the cellar itself thoroughly cleansed. All cisterns, reservoirs, drains, &c., should be carefully cleansed; and no stagnant water should be allowed to remain upon the surface near the residence of any family. All out-houses, such as privies, hen-houses and hog-pens, should be thoroughly cleansed and the contents applied to increase the products of the soil, instead of being allowed to remain upon the surface and their exhalations becoming agents of disease.

In relation to the treatment of dysentery, as it came under the observation of the committee, we have no specifics to offer to the public or to the profession. The great diversity of character under which the disease manifested itself, called for a corresponding diversity of treatment.

The remedies which are safe in the hands of the public are strictly those of prevention, while to the profession belong those, both of prevention and of cure. Of the former we have already spoken; and what we have said upon that subject is designed particularly for the public. And, again, we would enjoin their careful observance upon all, as they value health and a comparative exemption from those epidemics which occasionally depopulate our land. Of the latter we need speak but briefly. Mild cases, in general, yielded readily to a slight laxative, followed by some anodyne astringent. In children, castor oil, Hyd. Cum Creta, and Murray's fluid magnesia were found excellent preparations; and either given in quantities sufficient to produce a gentle laxative movement, and to free the bowels from all irritating accumulations, and followed by some of the preparations of opium, with such adjuvants as the particular case seemed to require, would often arrest the disease at its commencement. Severer cases yielded, after a few days continuance, to perseverence in a like course of treatment. But those cases, marked by the peculiar characterestics of the epidemic were by no means so easily controlled. In such cases, after having sufficiently relieved the engorged portal circulation, it often became necessary to follow immediately and efficiently with tonics and stimulants. And if not seen

early, before nature had herself relieved the engorged vessels, this became necessary on the first visit of the physician. Of these remedies, Quinine was undoubtedly the one most to be relied upon. Given in from three to five grs. doses once in two hours, and combined with opium or morphine, and a mild alterative, such as Hyd Cum Creta or Ipecac, it seemed to act very favorably, almost specifically, in controlling adynamic cases of this disease. Cases accompanied by less prostration of the vital powers, and marked by a higher grade of action did not admit of the employment, at so early a stage, of the tonic course of treatment. In such cases, after having first unloaded the bowels, it becomes necessary to sustain a slight mercurial impression for a few days, until the force of the circulation has been moderated and the biliary secretions measurably aroused to a healthy action, and then follow with Quinine.

Acetate of lead combined with the acetate of morphine often proved a valuable remedy, alternated with the quinine, especially in those cases attended with considerable hemmorrhage from the bowels. The oil of turpentine, in emulsion, often proved servicable in advanced cases, when evidences of ulceration existed. Nitrate of silver, administered in enemata, occasionally exerted a favorable influence in cases when the disease was more generally confined to the lower portion of the bowels. But the danger most imminent to the patient did not arrise from ulceration, but from a vitiated or decomposed state of the blood, rendering it incapable of sustaining the vital functions of the body.

Hence, to sustain the system, and arrest, if possible, the threatened dissolution of the blood, became the paramount indications of treatment, and these we believe to have been best fulfiled by the general course of treatment glanced at above.

Otisco, July 28th, 1856.

Sore Nipples.—℞ ext. opii. gr. j ; liqr. calcis ol. amygdal aa 3iij. Dip a piece of lint in the mixture and apply to the afiected parts.

ARTICLE IV.—*A Calcareous Placenta.*

Mrs. P., the subject of the following communication, was about 30 years of age, of medium size, full, muscular, development, had always enjoyed good health, been married about ten years, had been pregnant three times, and delivered of healthy children—the third pregnancy presenting twins. I had attended her in the two last confinements, which were natural, with the exception of an adherent placenta, so strongly attached in the last delivery, that I was obliged to introduce my hand in order to detach it, which proved quite a tedious process. She recovered rapidly, and without untoward symptoms, being soon able to attend to her usual occupations.

Towards the close of the summer of the following year, I was consulted occasionally for slight indisposition, incident to her fourth pregnancy, accompanied by a nervous state of mind, which was strongly impressed that from this she should never recover. In the evening of the 14th of October, she thought her labor had commenced, and I was requested to attend her.

On my arrival I found light pains, the membranes slightly protruding, no fever, and predicted for her a speedy delivery and usual favorable recovery. She again assured me, during this conversation, that I was mistaken, for she was "fully convinced that from my present bed I shall never rise." The pains increased, the os-uteri opened rapidly, and at 3 o'clock A. M., she was delivered of a full sized, healthy child. On applying my hand to the lower part of the abdomen, I found the uterus lower down, but instead of the usual round body it presented a flattened appearance. After waiting some time, to notice the effect of the pain, in expelling the placenta, and finding it not advanced, I made an examination. On tracing the cord up to the fundus of the uterus, the placenta was found entirely adherent, and instead of its usual spongy feel, of a hardened texture, so intimately connected and so entirely adherent, that its edge could in no part be detached by the finger. After making fruitless efforts to extract the placenta, it was deemed advisable to desist for the present.

This case appeared to present difficulties not easily overcome by the practitioner, or managed with safety to the patient. The uterine contractions were exceedingly strong, but did not in the least effect its detachment. About 11 o'clock the next day, I was met by my friend Colby Knapp, M. D., an eminent and experienced obstetrician, whom I had requested to see the case with me, and to whom I feel myself much indebted for advice, not only in this, but many subjects connected with this particular branch of our profession. The nature of the case was stated, and he was requested to make an examination. He found at this time a strong tonic contraction, the placenta hard and adherent. The most strenuous and judicious efforts, on his part, could not effect the slightest detachment, and it was determined to wait, prescribe anodynes, and be ready to take advantage, if possible, of whatever might occur in the chapter of accidents.

On visiting the patient, the next morning, we found her free from pain, had rested well during the night, no hemorrhage, and the state of the uterus in no respect altered, except that the placenta could be more distinctly felt at its edges. At this time my lamented friend, Dr. Henry Mitchell, an eminent surgeon and accoucheur, was associated with us. His efforts to extract the placenta were conducted with his usual skill and address, but with no better success. These repeated examinations and attempts to extract the placenta, had been conducted with as much gentleness as possible, at the same time with perseverance and resolution, but nothing had been effected. On further consultation, it was resolved to desist entirely from all manual efforts, give ergot in full doses, in order to assist, if possible, in accomplishing our object.

The uterine contractions were promptly produced by this agent ; aside from the pain, however, no progress was made. The next day an examination was made, merely to see if any change had occurred ; there was none. On the night of the fourth day she was very restless, pulse rapid, fever high and discharge fœtid. The system had begun to sympathise fully with the condition of the uterus, all attempts at extraction from this time were abandoned. It is unnecessary to give a

detailed account of the symptoms and treatment of the case from this date. Liq. chlorid soda, injected into the vagina, removed the fœtor for a time. Aperients, anodynes, and diaphoretics, were used as symptoms indicated, until the 12th day, when the constitution succumbed from the effect of irritation.

Eight hours after death an examination of the body was made in the presence of Dr. Knapp, and a few other medical gentlemen. There was no unusual appearance, until we laid open the uterus. The anterior part of the body, and the neck of this organ were in a normal condition. The placenta reposed upon the upper and back part of the fundus, of about two-thirds the size of a natural placenta at the usual full time of delivery. It was about 1 1-2 inch in thickness. From the insertion of the funis upwards, and about two-thirds of its circumference was *calcareous*, of a greyish white color, resembling in appearance, and hardness, more a limestone than a placenta. It was firmly adherent, so much so that the mucous membrane of the uterus seemed incorporated in the mass, and it firmly attached to the walls of the uterus.

What influence the former adhesions had in producing this, or what had excited the convictions of the mother that from this labor she should never recover, I have no solution to offer. None of the gentlemen present had ever met with such a case, although Dr. Knapp had deservedly a greater experience as an accoucheur than any general practitioner I have ever known. It is the only case of the kind I have ever met with in a somewhat extended experience.

My attention was called to my notes of this case, by reading the testimony of Dr. Pitcher of this city, given in the case of Eggerman against Kieffer, who remarked that "he had never seen a case of calcareous placenta—it is merely possible, as the condition requires considerable time for its development."

Such being the testimony of age and experience, we may justly conclude that such unfortunate complications are exceedingly rare.

If the publication of the case will induce any practitioner who has met with anything of this kind, to give it to the profession, my object in publishing will be attained.

Detroit, August 1, '56. J. C. Gorton, M. D.

ARTICLE VI.—*A Practical Treatise on the Art of Making and Preserving Microscopical and other Preparations.* By HENRY GOADBY, M. D., F. L. S., &c.

Aparatus used in cementing the Cells.—I employ for this purpose an aparatus that I made many years ago for mounting preparations in Canada balsam. It forms an important part of the contents of my "manipulating box," and it is one of the things pirated by the author of the modern work indicated.

A plate of wrought iron 6 3-8ths by 2 3-8ths and 1-8th thick, ground on its upper surface, *a*, [fig. 3] is supported by four legs of brass wire [*d*] 3-16ths diameter, and 3 inches long in the clear;* they screw into holes at the corners of the iron plate, and their free ends are placed in sockets in a mahogany board [*b*] the size of the iron plate, and 1-4 inch thick. When in use, the plate becomes so hot that it cannot be touched with the hand, and the legs by conducting the heat, mark the table; to render the entire apparatus more convenient, I found it better to add the mahogany board; the holes for the legs are defended with brass plates, and they fit tightly, so that the whole can be moved bodily out of the operator's way. The spirit lamp [*c*] is 1 1-4 inch square and 2 1-4 high to the top of the brass wick holder—exclusive of the ground glass cap. Every part of the glass that is to be coated with the marine glue should first be lightly painted with the fluid solution of it before described. Thus prepared, the slide and the four pieces of the cell should be placed on the iron plate, and tne heat of the lamp applied beneath.

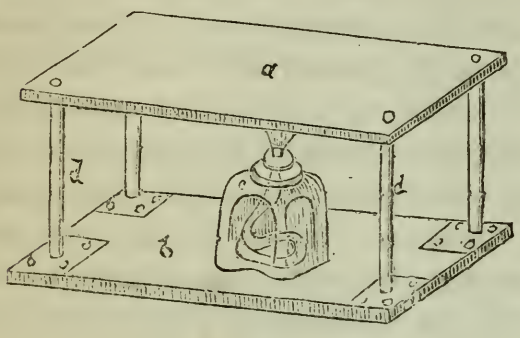

Fig. 3.

The position of the lamp should be frequently changed, to impart an equal temperature to the iron plate, for if there be too great an accumulation of heat at any one point, the glass will instantly break; should the plate become unnecessarily hot, lower the wick, or remove the lamp for a short time.

* The height of the spirit lamp must determine the length of the legs.

The solid glue may be cut into long thin slips with a knife or scissors, and applied to the painted surface of the slide and pieces of the cell, until the glass be hot enough to melt it, when it should be distributed evenly over the glass by means of another piece of glue held in a pair of short, strong forceps. Then search for, and remove particles of grit and dirt which are contained more or less in the glue—they are best seen by removing the glass from the iron plate and placing it on a piece of clean, dry, white paper: they can be easily removed by the point of a knife, or a piece of the solid glue. Extraneous particles are frequently broken into fragments between the glasses by the pressure necessary to form a joint, but they should always be removed, as they act mechanically as a wedge, and preclude the possibility of a permanent joint.

At a certain temperature the glue will bubble and boil, at which point it should be removed from further contact with heat; otherwise it will be decomposed, and all its characteristics destroyed.*

For neatness, and uniformity, the cells should be placed in the centre of the slides, and to accomplish this, it is best to mark the outline of the slide on paper, or card-board, with a pen, and then draw a cross, the centre of which is the centre of the slide, its limbs extending the whole length of the long, and the short diameter of the figure.

The glass being hot, and the glued surfaces freed from dirt, the several pieces of the cell are to be turned quickly over with a pair of forceps, and placed upon the slide in the relative position they should occupy.

The slide should now be put on the card board figure, each piece of the cell should be pressed down to the slide with two pieces of wood, and rubbed to and fro to express the excess of glue, and make as near approach to contact with the lower glass as is compatible with the thinnest layer of glue. The four pieces of the cell having been cemented to the slide, and to each other, its position can be readily adjusted to the centre, by the aid of the cross figured on the card. Should the glass become a little too cool, and the glue set, replace it on the iron plate, and complete the adjustment.

* This is the peculiar decomposition of the shell-lac before described.

Before the glass, and the glue, become quite cold and hard, it is desirable to remove the superfluous glue, which holds most pertinaceously when cold: the best form of instrument for this purpose, is the lozenge-shaped tool used by engravers, keeping the point close to the sides of the joint, or a knife-point may be used, taking care not to scratch the glass. As a rule, it must be borne in mind that, whenever a cell consists of more than one piece of glass, it should be ground flat on the pewter, or emery plate, after being glued to the slide, before it is fit to be trusted: the slightest inequality, either in the substance of the glass at one end, or in the layer of the marine glue, will prevent the possibility of making a good joint hereafter with the top glass or cover.

To clean the glass perfectly, I use a small piece of cotton wool, gathered into a knot, held by a pair of strong steel forceps and a drop or two of liquor potassæ, or a saturated solution of caustic potash, which softens the marine glue, and admits of its removal. Care must be taken not to allow the potash to remain in contact with the joints, as it decomposes the glue, and will render the joints unsound. The glass should be well rinsed in a large quantity of clean water, to remove the potash.

A top glass or cover must now be cut for the cell, and this should be somewhat smaller than the outer diameter of the cell on all sides, to allow room for the cement. The edges of the cover, and surface of the cell, should be painted with the naphtha solution of marine glue; and the cell will then be ready for the reception of the preserving fluid, and the preparation. It is best to fill the cell over some other vessel, to catch the excess of fluid, that is sure to run over the sides; a small shallow dish, or saucer, will answer this purpose; and if the cell be supported upon a level something placed in the dish, the better, as the operator will have his hands at liberty.

Having filled the cell with fluid, take a short but strong camel's (or badger's) hair pencil, and rub the fluid into the corners, along the sides of the cell, and even the bottom glass, for this reason: in pouring the fluid into the cell, it remains separated from the glass in every direction by a filmy layer of atmospheric air, which can only be removed, and the fluid and glass brought in contact mechanically, or by the thin gum water, or

saliva, formerly referred to. If a vessel be sealed down without attending to this precaution, the air will be liberated by degrees, and form a great number of minute bubbles, glistening in rows upon the sides, in the angles of the cell, and even upon the bottom glass:—ultimately they coalesce, and an air bubble of some size is the result. For the same reason (the displacement of air], the preparation must be placed carefully in the cell, and if it possess cavities in the under surface, they should be pressed out, if possible, while the preparation is entering the cell; and this should be managed so, that one end of the preparation goes into the vessel first, and the remainder lowered gradually. A good steady stream of fluid should be poured into the cell, the preparation being held down by a camel's hair pencil, or forceps, until all extraneous particles be washéd away, and the fluid continue bright and clear. When at rest, the fluid in the cell will present a *convex surface*, bounded on all sides by the painting of marine glue.

Now prepare one surface of the cover, either by the tongue or brushing on the fluid as before, and holding it by a pair of forceps at one end of its *longest* diameter, lower the other end to the cell, and let it down gradually—tne excess of fluid running before—until it be in its place ; then adjust it accurately, press down the cover till it touch evenly every part of the bed on which it is to rest, remove with a brush whatever fluid may yet remain on the outer edges, and paint them *once* more with the naphtha solution, including this time the top glass: apply the black cement, and the preparation is finished. Should another layer of black cement be required, allow the first to become quite dry, and isolate it, as before directed, with the naphtha solution; successive layers of the black cement must always be thus separated.

Drilling or cutting circular holes in glass for cells.—A more elegant mode of constructing a cell, is by drilling a circular hole through a piece of glass (fig. 4); but when I first attempted this plan, [in the years 1839–40,] the cost was prohibitory. At last I employed at the same time, three workmen in London to ascertain the lowest rate of cost at which holes of all sizes could be drilled in glass, in any quantity not lessthan one gross.

Neither of these men employed the same means; one of them, a German, cut most beautiful cells, perfectly square inside, but he could not do them for less than 1*s.* 6*d.*, or 36 cents each.

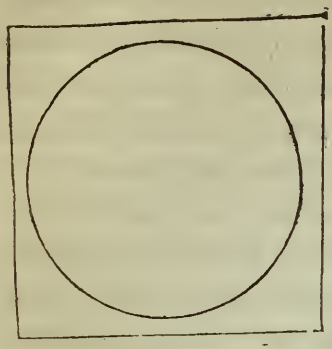

Fig. 4.

Another made very indifferent cells at 1*s* or 24 cents each; and the third made excellent work at 6*d* or 12 cents each. Subsequently, another man undertook to do them equally wellfor half the sum, and ultimately I procured them at the same price, excellently cut, from Mr. Dennis, of 1 Charles street, St. John's Street Road, London. The following is the plan of proceeding: procure a copper tube [or drill, as it is called,] of the diameter you desire your cell to be: I have long since discontinued cells of *all* sizes, and chiefly use one of 1 3-4 inch diameter, cut out of a square of glass 1 1-2 inch *full*, outside measure.

With my large slides such a cell enables me to preserve great uniformity in my preparations, affords abundant space for the transmission of light around the object, holds a sufficient quantity of preserving fluid, and the squares can be cut with the same guage used for the slides themselves. The length of the drill may be from 1 inch to 1 1-2 long, and made to run true in a lathe. The squares of glass being all of the same size, I cement a number of them together with the marine glue, so as to form a pile of from one to two inches high.

Where a lathe is used, it is important to face the pile of squares with something that has been already perforated with a hole the size of the drill, to enable the latter to enter at once upon its work, and prevent the scratching [and spoiling] the first cell. For this purpose, *brass* perfectly flat, can be used; but a better thing is a square of *plate glass*, one-fourth of an inch thick, already perforated by the same drill, and it should be kept for this purpose alone.

The copper drill, is to be charged with fine cutting sand and water, and the block, or pile of glass squares applied to it, and gradually pressed up by the tail spindle of the lathe while the

drill should revolve at a *moderate*, but not a *rapid* rate. When a number of cells are drilled, they can be easily separated from the block by placing the outer cell downwards on the iron plate, and applying the spirit lamp : they can be removed one after the other with great rapidity, until only undrilled glasses remain, and to these other squares may be added if necessary. To make an oval cell, two round holes [fig. 5, *a*, *b*,] must be drilled so as to intersect each other ; their proximity to be determined by the *length* of the oval required. The pieces that remain on each side, *c*, *d*, can be cut off with the diamond, if the glass do not exceed one-eighth of an inch thick, otherwise a disc of copper, the diameter of a ten cent piece must be applied to the lathe, charged with sand and water on the edge, and it will speedily make the sides of the cell level.

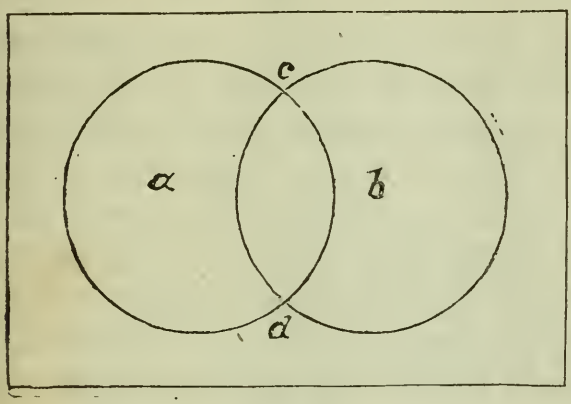

Fig. 5,

There is another excellent method of cutting either round, or oval cells of any size, *provided the glass do not exceed one-eighth inch in thickness*, for which I am indebted to Sir Charles Babbage, the inventor of the celebrated calculating machine. Mount a glazier's diamond to cut a circle ; this can be done in a variety of ways—I have mounted my diamond as shown in fig. 6; *a* represents a square bar of iron, 8 inches long, with a male screw at the lower end to fit a plate of iron [*i*] tapped to receive it, *b b*, two arms 4 1-2 inches long, clamped to the upright bar by thumb screws, the other extremity drilled, and

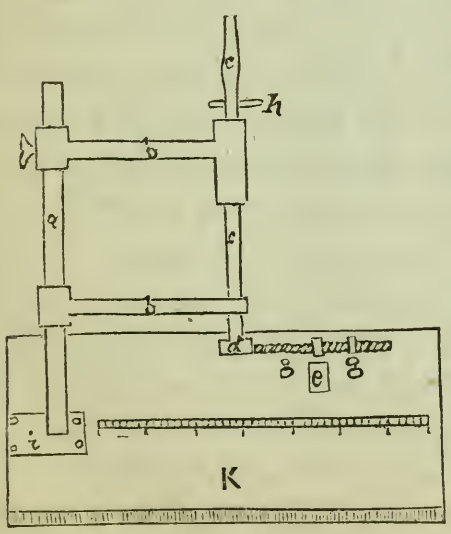

Fig. 6.

ground to receive *c*, which is a spindle, to the lower end of which is rivited a screwed rod *d*, 4 inches long from the centre. *e* is a box to receive the glazier's diamond when removed from the handle, and keptin its place by a tightening screw ; continuous with this box is a square nut, *f*, perforated with a hole large enough to allow it to swing freely on the screwed arm. *g g*, are square screwed nuts, one on each side of the diamond box

In adjusting the diamond to cut a disc, say three inches in diameter, move it along the screwed arm until the point be coincident with 3 inches as marked upon the scale [*l*] which has before been drawn upon the chamois leather which covers the board K , then bring the nuts close to either side of the diamond box, adjust it to its cutting angle, and then by means of a wrench in each hand, *tighten* the nuts simultaneously. The glass to be cut may now be placed upon the board; remove the pin *h*, and lower the spindle [*c*] till the diamond touch the glass: then holding the screwed arm by one hand, turn it steadily round, and it will describe a circle of the size to which the diamond has been previously adjusted.

As the spindle has been ground to fit the two collars through which it works, the motion is smooth and steady. Such a machine would be improved by casting the upright bar and the two arms, *b*, *b*, in one piece; the height need not exceed six inches. Having cut a circle upon a piece of glass, if the *disc* be wanted, cut the glass in three or four places *from the circular cut to the outer edge*, and carefully break off the pieces ; but if a *cell* be wanted, the disc must be removed without injury to the remainder of the glass, which is to form the walls of the required cell.

The cut, already made, gives the exact dimensions of the aperture required; now alter the position of the diamond on the screwed arm, and cut a circle *within* the first, adjust again, and cut another circle within the last, and so proceed cutting circle, within circle, as long as the diamond can be adjusted to cut, and the glass will then present a series of concentric rings.

Take a centre punch, and screw it point upwards in a bench vice ; place the centre of the *innermost circle* on the point of the punch, and get an assistant to hold the glass while the ope-

rator takes another centre punch, and placing its point *upon* the glass, immediately over the point of the lower punch, strike the upper punch lightly with a hammer, *not to break*, but to *pound* the glass lying between the two punches. Presently a small hole will be made ; now bring the broken edge of the glass upon the lower punch, continuing the pounding motion, until the hole be sufficiently enlarged to admit of using the "*plane*" of the small, and light hammer with which the punch has been struck. At this stage of the process, the use of the upper punch should be discontinued, and the operator holding the glass himself, *keeping an edge of the hole always supported on the lower punch*, while he lightly taps it with the plane of the hammer, not attempting to remove the *circles* as cut, but rather tracing the hole from the *centre to the circumference*, [like making a cross in the glass,] and if it have been *cut*, not *scratched*, large pieces will fall out as soon as they have room enough, and the entire operation be finished in less time, than it takes to describe it.

In like manner, an oval cell can be made as easily as a round one. The glass should not be cut into shape to form the *outer* dimensions of the cell, until the central hole be made, as it is likely to break. Upon this plan a hole of any size can easily be cut in a plate of glass of any dimensions. Sir Charles Babbage told me that he once communicated this plan to a glazier, who employed it most extensively in punching holes in squares of glass to form the bottom plates of street gas lamps, for the transmission of the gas pipe.

I have already remarked, that the above plan of cell-making is limited to glass one eighth of an inch thick ; my wants frequently require cells full as deep again; I could cement two or more shallow ones together, and thus build up any required depth, but they look heavy, and I prefer therefore to cut them out of plate glass, of the proper thickness. When in London, I could obtain the services of Mr. Dennis, to cut anything that I required, at any time; but in this country, at this moment, I am altogether thrown upon my own resources. To meet my wants, I have contrived a small, portable, and most efficient apparatus, by means of which any lad can cut cells as well as

I can, and with this machine my son has cut for me the best cells I have ever had.

It consists of *a*, *a*, [fig. 7, A,] an iron support with three arms and a square plate at the lower end of it, cast in one piece. *b*, a vertical bevelled wheel working *c*, a horizontal beveled wheel, by means of the crank *d*, the latter wheel, having for its axis a spindle *e*, the lower end of which screws into the brass mount of the copper drill, *f*, whilst its other end passes through a collar in the upper arm of the iron support, and is regulated in its action by the wooden lever *g*.

To be Continued.

SPIRIT OF THE MEDICAL PRESS.

Headland on Narcotics.

The following extract we deem important and full of interest, inasmuch as it presents a fair statement of the doctrines, or rather theories, of two of the most eminent men of the age, with a philosophical refutation by the learned author. We have thought it might be profitable to our readers, by calling their attention to a work which has elicited from the press, as far as we have had opportunity of knowing, universal commendation, and thereby inducing them to add to their libraries, "Headland on the action of remedies."

Two distinct attempts, of which the second and most plausible was probably suggested by the first, have been made within the last few years to explain the opperation of Narcotic medicines upon a chemical principle.

The first theory is that of Liebig. He applied it only to inebriants, such as Alcohol. He supposes that they were burnt in the system, combining with some of the oxygen which is needed by the tissues, and that by so doing they were able to check the vitality or control the functions of the latter — But it is at least a matter of doubt whether alcohol and other similar fluids are to any extent consumed in the system in this manner; and, if they were,

it is not clear how they could withdraw enough oxygen to prejudice the tissues of the body, or why they should prove narcotic any more than the calorifacient articles of food, as Starch and Sugar, which themselves remove Oxygen in the same way. It has been properly urged by Dr. Snow, that breathing pure oxygen does not remove intoxication or narcotism; and that the weight of Carbon and Hydrogen in twenty-four minims of Chloroform, an amount sufficient to cause insensibility in an adult, when introduced into the blood, does not exceed four grains—a quantity quite insignificant in comparison with the oxygen absorbed by the lungs. Such simple facts are fatal to the theory of Liebig.

That these inebriant medicines, as well as Narcotics in general, operate by *retarding the combination of oxygen with the tissues*, by some chemico-dynamical influence, without themselves uniting with oxygen, is a proposition more difficult to gainsay.

Prout, Liebig, snd Bocker have found that the amount of Carbonic acid gas exhaled by the lungs is diminished under the influence of Alcohol. Dr. Snow has proved that the same diminution results from the inhalation of Chloroform and Ether. It has been remarked by Professor Graham that the presence in the air of the vapour of Ether will retard or prevent that slow oxidation of Phosphorus to which its luminous appearance is owing.

Putting together such facts as these, Dr. Snow has proceeded to deduce from them an ingenious theory of the action of Narcotic and Sedative medicines. To use his own words, he conceives, "that these substances modify, and in larger quantities arrest, the animal functions, in the same way and by the same power that they modify and arrest combustion, the slow oxidation of phosphorus, and other kinds of oxidation unconnected with the living body, when they are mixed in certain quantities with the atmospheric air." He supposes that all the animal functions are essentially connected with the process of oxidation going on in the system. (*Medical Gazette*, 1851.) Some stress is laid on the power of these substances to arrest putrefaction (a process of oxidation) in animal bodies. But, to speak now only of those volatile narcotics to which the above theory was in the first instance restricted, it may be urged that alcohol arrests putrefaction by coagulating albumen, and not by preventing oxidation; that if Chloroform exerts the same action, it does not do so, as might be inferred, in the ratio of its therapeutic power; and that Creosote, Alum, Sulphate of Copper, Acetic acid, and other various materials, are powerful in controlling putrefaction, but are not narcotic in any marked sense.

Again, it is urged that Cold, and obstructed respiration, both of which hinder the oxidizing or calorific process in the blood, operate on the vital powers after the manner of Narcotics. But, by hindering respiration, they cause an accumulation in the blood of Carbonic acid, which is confessed by all to be itself a narcotic poison.

This discussion concerns the preliminaries only. Against the theory of

narcotic action by disoxygenation, as maintained by Snow, Robin, and others, many strong objections may, I think, be urged.

1. In the first place it may be affirmed that there is no chemical analogy between inebriants and other narcotics or sedatives. The former do not contain nitrogen; in the latter it is a frequent ingredient. Between the volatile compounds of ethyle and formile on the one hand, and such a substance as hydrocyanic acid on the other, there is little enough of chemical similarity; and between either of these and the alkaloids Morphia and Aconitina, there is no resemblance at all in chemical structure or affinity. And whatever may be thought of the Alcohol series, I deny altogether that these alkaloids exert any kind of influence on the process of oxidation. But the proposers of this theory have doubtless perceived that if not extended to all narcotics, it cannot in reason be applied to any of their number.

2. I think it may further be urged that far too much has been said of the action of such agents as Ether in hindering combustion. (It may be remarked that Alcohol hardly hinders it at all, and Chloroform itself will not prevent the oxidation of Phosphorus.) All gases and liquids which do not support combustion retard in a sort of mechanical way the combination of oxygen with other substances. They simply interpose their particles between the oxygen and the matter to be burnt. I conceive that this is the whole explanation of the action of some volatile narcotics, in retarding oxidation out of the body. When we wish to protect the proto-salts of iron from the oxidation to which they are especially liable, we do it best by rubbing them up with sugar, which serves to protect their particles from the air. Is sugar a narcotic?

3. Narcotics and sedatives act directly upon the nerves themselves. Chloroform, Aconite, Prussic acid, and Morphia, are found by experiment to paralyse the sensory nerves when applied to them, just as Strychnia in the same way will excite the motor nerves. If, therefore, the former interfere with the blood-processes, it must be by a subsequent action of the nervous system, which is first influenced, and not by an action on the blood primarily.

4. I am inclined to think that the diminution in the amount of Carbonic acid exhaled, an observation from which the theory took its rise, may be best explained by considering the effect of Narcotics in diminishing the number of the respiratory actions. In various degree these agents all influence the brain, and with it the centre of the respiratory function. From this interference with the action of the medulla oblongata, there follows a decrease in the number and depth of the inspirations, and in exact proportion to this decrease will the Carbonic acid exhaled by the lungs be diminished in amount. The same thing takes place in natural sleep.

5. Among the many questions which suggest themselves, the following is foremost. If this be the explanation of Narcotic action, in what manner do stimulants operate? Producigg the reverse effect to that of a Sedative, their *modus operandi* should exactly the opposite. They should encourage

the process of oxidation. But this is an action which cannot be said to be exerted by any stimulant.

And we are still further led on to the remarkable supposition that the primary stimulant effect of narcotics, such as alcohol and opium, is to be explained by their first promoting oxidation, although we have just assumed that they exert a chemical action of a contrary kind. This is very like a *reductio ad absurdum*.

6. Again, supposing this theory received, the great varieties of action observed among different Narcotics would be more inexplicable than ever. Why should these affect the motor nerves, those the sensory nerves; some the brain chiefly, others, the nerves of the heart? These things can only be explained by supposing a diversity of operation on the nervous system. If all these agents did nothing,but kept back from its combinations the oxygen in the blood, their action might differ in degree—but not in kind, for it should always be essentially the same.

7. Without dilating upon the point, it will be enough to allude to the utter inadequacy of such a theory to account for such a wonderful and instantaneous action on the system as that of Hydrocyanic acid. It must be a very powerful anti-oxidizer indeed.

8. In the next place it may be asked—how are the varieties of the same agent on different systems to be explained on this hypothesis? How is it that some men will bear such enormous quantities of alcoholic drinks, and the opium-eater consume in the day his two drachms or more of opium? Is it that such men have accustomed their systems to go on without oxygen? Some animals, as apes, are said to be altogether insensible to the action of opium. But if this be a chemical action, it being granted that in the systems of all men and all animals a perpetual process of blood-oxidation is going on—why is it ever interrupted? Why is such an immunity enjoyed in these cases?

9. Lastly, I may again refer to the curious fact that Morphia and Chloroform act as paralyzers on the irritable tissues of plants, (*v.* note, p. 252.) Without pretending to explain this phenomenon, we may at once perceive how strongly opposed it is to the theory now under discussion. In animals an oxidation goes on, by which Carbonic acid is formed; in vegetables, a contrary process, a deoxidation, by which oxygen is liberated. Narcotics, it is said, act on animals by hindering the first process. How, then, do they operate on vegetables, where the result of their action is similar, and there is no oxidation to be retarded?

This theory is perhaps worthy of a further discussion, but I have already too largely drawn on the space at my disposal. For, as the chief defender of this hypothesis is one to whom therapeutic science is so largely indebted, I could not treat it lightly. I am not sure that I shall convince, by these objections, any of those who may already have adopted this idea. In obscure matters of this sort, there will always be found some who will prefer to con-

struct some kind of hypothesis, however frail, on a set of ascertained facts, however few, rather than be content, like myself, to give up all dogmatic assertion, and remain still in the dark on a matter which by its nature is difficult, or even incomprehensible. And yet I feel persuaded that, in this instance at least, the latter will prove right in the end. In one sense, it is better to know too little than too much.

We are still ignorant, as we ever shall be, of the principle of life; we have not yet discovered, though some thought they had done it, the cause of nervous action; neither does it seem that we are yet in a position to make any positive statement as to the intimate manner in which Narcotic agents operate on the animal system.

Abstract of a lecture on the urinary organs—Delivered before the Medical Students, during the Winter of 1855-56; By D. D. Slade, M. D., Boston.

Gentlemen:—In my last lecture, I spoke to you upon the morbid admixtures with the urine—viz: Pus, blood, mucus, epithelium. I stated to you the appearances the two former presented when found in the urine, and also the means which we had of arriving at a correct diagnosis of their source, when so found.

Although the two latter always exist in the urine in a moderate degree, yet they may become so abundant as to constitute a morbid condition. Thus the mucus found generally as a mere cloud, may exist as a substance so thick and tenacious as to be drawn out to a considerable length, in pouring it from one vessel to another. You well know that it is often of great importance that we should be able to distinguish a deposit of mucus, forom one of pus. There are some few point which I wish you to bear in mind, and which will enable you as a general rule to distinguish between these two deposits. Urine containing more than the usual amount of mucus, is almost always *alkaline*, and exceedingly prone to decomposition. When the urine is acid, mucus may be distinguished from pus, by first appearing gelatinous and hangihg in masses, and by not being easily or thoroughly mixed with the urine when agitated; while the second appears as a homogeneous layer at the bottom of the vessel, and can be readily mixed with the supernatant fluid. If the urine be alkaline there is more difficulty in distinguishing between a mucus and purulent deposit. As a means of diagnosis, we have, however, the action of acetic acid which coagulates the deposit of mucus, converting it into a thin semi-opaque corrugated membrane or pellicle. Moreover, mucus is not coagulable by heat or nitric acid, as is pus. It is now clearly established that by the aid of a microscope, globules of mucus cannot be distinguished from those of pus.

The addition of acetic acid to the pus globule, renders the envelope transparent, and the nucleus more marked; it does not have this effect upon the mucus globules After all, we must rely in establishing our diagnosis, mostly upon the effects which heat and nitric acid have upon the deposits.

As a general rule, the presence of any amount of mucus is symptomatic of some mechanical cause which serves to obstruct the free passage of the urine, such as a calculus, an enlarged prostate, stricture of the urethra, tumors, &c. The history, symptoms, and exploration will enable us to decide upon which of these causes the unnatural deposit depends.

Epithelium scales, are as you well know, easily recognizsd in the urine, by means of a microscope. The exfoliation of these cells, is semetimes very great. so as to give rise to a deposit in the urine, which resembles mucus, but has not its viscidity. This often accompanies certain renal diseases, especially the oxalic diathesis. These scales are almost always found blended with pus and mucus. I come now to speak to you of what is termed the irritability of the bladder, which is characterized by a more or less frequent desire to micturate. This affection may occur at all ages, is common to both sexes, and depends upon a variety of causes, as upon some disease of the uniary organs, upon some altered condition of the urine itself, upon the effects of certain medicines, upon mental causes, exposure to cold and wet, upon diseases of the digestive organs, upon morbid growths, and upon sympathy of the neighboring organs. Thus you see, gentlemen, upon what numerous causes this annoying affection may depend, and it behooves us, if we would be of any service to our patient, or give ourselves any satisfaction, to ascertain if possible upon which of them it depends, before commencing our treatment. At the very outset, then, we must determine the presence or absence of the stone, of strictures of the urethra, or of any other impediments to the free passage of urine, or of the existence of *any* disease of the urinary organs, particularly of the kidneys. You must bear in mind that the gonorrhœa and congestion about the neck of the bladder are frequent causes of irritability. The symptoms of the first are well known to you. The latter affection is characterized by a feeling of fulness in the perinæum, by smarting at the neck of the bladder, and by more or less scalding along the urethra. The desire for micturition is almost incessant.

Then the urine itself must be examined to ascertain if and in what way it differs from the healthy standard. We must ascertain if possible, the peculiar diathesis of the patient. The history of the case will inform us if the irritability is dependent upon the use of diuretic medicines, upon exposure to cold or wet, venerial excesses, dyspepsia, or whether it may not be the mere force of habits. Examination will inform the practitioner if the irritability is merely sympathetic as is often the case in pregnacy, or perhaps he may detect some morbid growth in the pelvis, homorrhoidal tumors, malignant affections, or ulceration in the rectum. In young females, at about the age of puberty, there is a form of vesical irritability, which evidently depends upon imperfect

menstruation, and closely connected with hysterical affections. This form of irritability will often tax our diagnostic skill to the last degree.

I have said, that irritability of the bladder was not unfrequently dependent upon mere mental causes. The following case will serve to illustrate this Mr. ———, a merchant of this city, called upon me in the month of January, saying that a day or two previous he had been attacked with a constant desire to micturate, obliging him to rise every hour during the night even. Upon enquiring more particularly into the case, I ascertained that the patient having been deserted by his partner, and thus having all the business of the firm thrown upon him, and that too at the busiest season, the mental anxiety was too great for him, and the result was the affection in question. Repose, and a very simple antiphlogistic treatment completely restored him in a few days.

We have not by any means considered all the sources of irritability of the bladder. In establishing our diagnosis, we must endeavor in all cases to ascertain whether the affection is direct or sympathetic merely;—if the former, whether it is simple or compound, external or internal, if the latter, to what the sympathy is due.

Having ascertained, if possible, the cause of the affection, gentlemen, our next point is to attempt to remove it, or at least to give relief. Strictures of the urethra, calculi, foreign bodies in the bladder, or any mechanical obstruction must be removed. If renal disease be present, we cannot hope in the majority of cases to be of much service to our patient. If the urine be altered from the natural standard, we must endeavor to restore it. If inflammation is the cause, a proper antiphlogistic treatment is indicated. There are few cases that will not be much benefited by the warm hip bath, anodyne injections, hot fomentations, and rest in a recumbent posture. Of course, in those cases where the irratibility depends upon the existence of some morbid growth, or upon a gravid uterus, we cannot promise any thing beyond partial relief. I have found a tea made of hops and uva ursi, in the proportion of half an ounce of the former, and an ounce of the latter, to the quart of water, highly beneficial in irritability about the neck of the bladder, four or six wine glasses a day is sufficient. We often desire to have some simple remedy which we may safely administer in similar cases. I know no one better than this. In ordering the warm bath for our patients, we should direct them to remain immersed at least forty-five minutes, and an hour if possible. Any length of time, much shorter than this, is of no avail. But the temperature of the water should range from about 85 to 95, and should not exceed this. There are many little points which it is well for you to know, which you will find practical, and which experience only teaches. You perhaps will find that authors consider them too trivial to mention.—*New Hampshire Medical Journal.*

The return of the secretion of tears, which has been suspended in the attack of pneumonia, is a good augury for its favorable termination.—*Trousseau.*

Atelectasis of the Lung.

Dr. S. Conant Foster read a paper on *Atelectasis Pulmonum* (imperfect expansion of the lung) preceded by the history of a unique case of this peculiar affection. The patient was a child, fourteen months old, of general good health, which was seized with obscure symptoms, as fever, abdominal tenderness, slight cough, and an interrupted respiration, which consisted in the child's holding its breath at the end of each inspiration. The examination of the chest detected only dullness over the middle lobe of the right lung. Although the patient's general symptoms improved somewhat under treatment, still, the peculiar respiration continued—it refused nourishment, and gradually sank, and died. Repeated examinations of the chest elicited no new facts in regard to the lungs, except the existence of a slight bronchitis. The autopsy revealed a healthy state of the left lung and heart, while the entire right lung was in the condition described as atelectasis. The upper lobe was united to the thoracic parieties, and the lower lobe to the diaphragm by old, and very firm, false membranes; recent false membranes was also found in cavities formed by the old.

The adhesions of the lungs to the ribs, Dr. Foster considered to be congenital, and gave rise to the phenomenon of interrupted respiration already alluded to; and which had been noticed since its birth, being especially well marked when the child was sick. The order of sequences which he is led to make in the progress of this case is as follows:—bronchitis occurring, while the child was teething, led to atelectasis of the middle lobe; embarrassed respiration, and hyperemia, consequent upon this change, increasing the traction upon the old adhesions, led to inflammation and effusion at those points; these conditions reacting, increased the tendency to atelectasis (imperfect expansion of the lungs,) and the whole lung became involved.

The author then entered upon an extended and interesting examination of the literature of this disease; and the various opinions which had been advanced in regard to its true pathology. He accepts the term atelectasis, as given to this affection by Jorg who first called attention to it in 1835. This author showed, that in new-born infants, it is not due to proceeding inflamation, but the simple persistence of the fœtal state. Various opinions were subsequently expressed as to the nature of the change in the lung, and it was generally described as the result of inflammatory action, until 1844, when M. M. Bailly and Legendre, by the simple act of insufflation, proved that the collapsed lung could be restored to its healthy state, and consequently, could not have been the seat of an inflamatory process. The microscope also reveals only lung tissue in these cases.

The writer then proceeded to consider the different varieties of atelectasis: first, that occurring in the newly-born, where, from debility of the child, or the impaction of mucus in the bronchial tubes, the lung is but imperfectly expanded, on the first attempts at respiration; second, that occurring after

complete expansion of the lung, where, from the stoppage of the bronchial tubes by mucus, the result of acute or chronic catarrh, the lung returns to its fœtal state. The causes of this condition of the lung are, evidently, those which impede the entrance of air into the air-cells. They are, therefore, those which either enfeeble the respiratory system, or, by clogging the air-tubes, prevent the entrance of air to the cells.

He drew attention to the fact, that atelectasis is a very frequent sequel of whooping-cough, and has frequently been mistaken for pneumonia. It is a little remarkable, that Dr. Alderson, in a paper published so early as 1830, (*Med. Chir. Trans.*, vol. xvi.,) on the Pathology of Whooping-Cough, describes this condition of the lung in the fatal cases from this disease. He considered it the result of inflamation, and treated it accordingly. Pneumonia in infants is, in Dr. Foster's experience, a very rare disease; and when it does occur, it is as readily diagnosticated as in the adult. This is a fact of great practical importance, as the treatment must be very different; atelectasis more often being a disease of debility, while pneumonia is one of inflamation.

The paper closed with remarks upon treatment. This consists essentially in the use of stimulating and invigorating remedies, externally and internally, and regulating their employment by the degree of febrile excitement, which bronchitis or some existing disease may induce.

The subject of this paper is one of such practical importance in infantile therapeutics, and, withal, so little studied and understood, even by our most scientific physicians, that Dr. Foster has rendered the profession an essential service, by bringing it before our largest medical society in so elaborate a discussion of its history, pathology, treatment, etc. The essay, when published, will be a valuable contribution to our knowledge of this obscure affection.

Case of Tænia Lata, occurring at the United States Marine Hospital, Chelsea, Mass. Dr. Charles A. Davis, Superintendent and Physician. Reported by Geo. A. Crosby, House Physician.

Alfred Crosby, Mariner, a native of Uleoburg, in Finland, 17 years of age, entered the hospital April 18th, having just arrived from Batavia, reports that he has been for three years suffering from the tape worm, pieces of which have come away at times with his stools. Some three weeks previous to his entrance, a piece a fathom long passed from him. Suffers from sickness at his stomach in the morning, and has an uneasy crawling sensation, which continues until he has eaten something—has an unsatiable appetite, being always hungry and never satisfied; and after eating heartily feels oppressed and sometimes vomits; says his tongue has always been clean—it is so now—his

breath offensive, and eyes sunken with blue rings around the orbits; pulse 100 rather small but even.

The symptoms indicating Tænia of some kind, (not having heard at that time of the "Patent Tape Worm Trap,")

Kousso z ss
Aquæ Bull. z xij.

Mascera per mediam horam. Cola.

Of this he took z jv every fifteen minutes until the whole was taken. At the end of two hours, no operation following, he took

Black draught, z iij

The patient came in at 9 A. M., and at three o'clock in the afternoon, a whole tænia lata, and a part of a second came away. The longest portion measuring twenty-one feet the shorter three.

The "Tænia lata, or Bothriocephalus as it is more properly called, has an elongated flat articulated body, and a sable tragonal head, with two or four lateral and opposite fossæ, or depressions, from which it takes its name. (Boigion, a trench, and Kephale, a head.") "The articulations of bothriocephalus are short and broader in proportion to their length, and to the size of the animal, than those of the tænia solium." The form of the head most characterizes the difference between the two kinds of tænia, that of the lata being elongated and with a long depression upon both sides; between these depressions near its end, is an opening supposed to be the animal's mouth. Some French writers have called it the "Tænia non armi," because it has not hook-like appendices as in the tænia solium.

The Tænia lata is more apt to pass whole, than other kinds of Tape Worm, it being less liable to break at the joints. Its color is a little lighter than the tænia solium when first passed, but after being in alcohol a short time, is of a decidedly greyish color, becomes soft, and easily torn.

The smaller intestines are said to be the places which it inhabits, where a number have been known to live together in perfect harmon, *so far as heard from.* In England and this country they are said to be rare, generally found in foreigners—Russia, Poland, Switzerland and Finland being their native places.—*New Hampshire Medical Journal.*

Preservation of Vaccine Virus in a liquid state.—Dr. Maurin (*Jour. de Chimie Med. Mars* 1856,) says that glasses charged with the recent virus can be transported to great distances, and the virus preserved fit for use without moistening, by enveloping the glasses containing it in some fresh beet leaves, being careful to renew these leaves when they commence to fade or decay, say every 8 or 10 days. Dr. Maurin has used vaccine matter thus preserved for more than a month, with the best results.

Monomania—From Journal de Medecine et de Chirurgie Pratiques, March, 1856.

The learned may not always agree upon questions of physiology, philosophy, or morals, but it rarely occurs that a truth introduced into science is expelled from it by the defection of those who would seem called upon to support it. However, at this time, a question has been raised, among physicians for the insane, which deserves notice, because it interests both practical and legal medicine, and, above all, humanity. We know that Pinel and Esquirol held it to be an incontestably established fact, and one, which has heretofore been but little disputed, that insanity may attack, partially, one or several of our faculties, without modifying, in any degree, the others, which remain intact as in a state of perfect health; in other words, that the insane person may reason justly upon all points, except that which is the constant object of his delirium. This condition, which, however, did not escape the observation of the ancients, was studied by Esquirol under the name of *mania*, and divided into several classes, designated according to the number or character of the faculties affected.

The theory of monomania has been attacked with much animation before the Medico-Psychological Society, recently established at Paris, and composed of eminent physicians for the insane. It has been defended with much strength of reasoning by the greater part of the practical men, whom the society counts among its members; and we believe that those among the *savans* devoted to psychology, who oppose this theory will yield to the good sense and observation of facts, which establish triumphantly the independent action of the faculties and their isolation in a state of health or disease.

We have before us a pamphlet, the work of a distinguished physician for the insane (M. le docteur Pinel,) which presents the question in its true light, and replies explicitly to the objections which have been urged against the theory of monomania.

"It is of little consequence," says the author, "whether the predominent or delirious idea be a primative or secondary phenomenon, or whether it be occasioned by the alteration of this or that order of faculties, by the disorder of one or several of these latter; or whether it has been preceded or followed by a period more or less characterized by other phenomena; this is not the question. That which it is important above all to know, in order to decide as to the existence of monomania, is whether there are or are not some insane persons who present, during a period of more or less duration, the aspect of rational men, who impress themselves as such almost always, not only upon the world generally, but upon magistrates, and physicians little versed in the study of mental affections, and sometimes upon those devoted to this specialty—whether or not these patients, aside from one or several insane ideas which absorb them, are not capable sometimes, if not frequently, of acting, of conducting themselves, of conversing, writing, reason-

ing, judging, and discerning, in a manner to induce the belief that they are of sonnd mind, whether or not one touches their *corde delirante*, whether they endeavor to change the subject or dissimulate in reference to the insane conceptions to which they are a prey; and further, if the characteristics of the partial delirium or monomania, whether oppressive or expansive, are not so decisive that they cannot be confounded with those of general delirium, from which they differ essentially; and whether the diagnosis of the latter is not ordinarily easily determined, while, on the contrary, the former may not, under some circumstances, occasion doubt, and leave even experts in uncertainty; in fine, if, in monomania, and notwithstanding all the appearances of the integrity of reason, moral liberty is not profoundly impaired in such manner that the monomaniac, being no longer master of his own will, acts irrisistibly, although, in some cases, with knowledge and discernment."

The question, as presented by M. Penel, is, in fact, the one to be discussed: can insanity be partial, impairing some of our faculties to the exclusion of others, so as to leave to us the appearances of reason whilst we really merit to be classed among the insane? This is what it imports us to know. Apart from this, whether there exists a *monomania* in all the acceptation of the term—that is to say, whether the subject be delirious exclusively on one point, or whether several of his faculties be affected at the same time, thereby making him an *oligomane*, as he would be called—it is of little consequence; it would be less difficult to prove that all the faculties of a man were intact, with the exception of one rather than of two or even three; but the discussion having reached this point, has no more interest for the physician, who should stop only at the question of delirium or partial delirium so well presented by M. Pinel. What do the adversaries of the the theory of monomania tell us; for example, in what catagory would they class the the man whose history is traced by the author as follows:

"M. Ferrus, directed by the court to ascertain the mental condition of a patient in my establishment, came frequently during a period of six months, without being able to make his report. During his prolonged visits, this monomaniac comported himself in such a manner as to render it doubtful whether he was insane or not. He replied to all questions with perfect lucidity, or eluded with address, spirit, and politeness those which might embarrass him. His demeanor, his gestures, his physiognomy, and his dress manifested nothing peculiar.

"M. Ferrus tried every method to discover traces of his partial delirium; snares were laid for him; he was made to converse, without suspecting the presence of our honored associate in an adjoining room, where he could hear the conversation. M. Ferrus took him a biscuit dipped in a glass of wine in which powdered sugar had been put, saying to him that his wife had sent it; nothing, however, revealed the existence of one or several delirious ideas, and yet this patient was a monomaniac who had attempted to kill his wife and afterwards to commit suicide. After the trial of Mme. Lafarge, he

always believed that his wife had attempted to poison him, and still sought to do it; he thought his linen sent by her contained poisonous substances, such as arsenic and belladonna; that he had detected her reading the *Matiere Medicale* of Barbier, which his physician had loaned him secretly; that his bed was often covered with a metallic powder. Apart from this fixed idea, and which he did not always give utterance to, but made known with reserve, which he dissimulated with ease, and only to certain persons, denying it to the greater number, and some days even to those to whom he had previously confided it, particularly if there were others present—he spoke and acted in a rational manner.

"It was only after some length of residence in my house that he confided to me his insane convictions, which he afterwards disavowed in the presence of M. Ferrus.

"This monomaniac is the same patient, a portion of whose history M. Baillarger has reported in his paper on monomania. I saw him, several months since, at the Bicetre, under the care of Dr. Voisin. He is at present in a state of dementia."

We have often known physicians differ in opinion as to the nature of an ulcer, to which had been attributed a syphilitic character. Whilst they deliberated, the disease made progress. A syphilitic ulceration in the throat, or an exostosis,by revealing the true nature of the disease, made the consulting physicians agree. Without wishing to institute a comparison between affections so dissimilar, may we not say that monomania, the diagnosis of which is often so difficult to establish, that the world and even physicians refuse to recognize it in certain subjects, is no longer, like the ulcer of which we have spoken, the object of doubt with any person, as soon as the delirium, once partial, has become general? Observation proves this, that frequently persons, after being insane on one point, have successively all their faculties weakened or perverted, but that they also often remain monomaniacs during many years, and even exercise such care to conceal the aberration of which they are the victims, that those around them do not suspect the existence of the malady with which they are affected.

These conclusions are rendered evident by M. Pinel, in the pamphlet from which we have quoted. It is not necessary, in order to appreciate them, that one shall have directed his studies in a special manner to the treatment of the insane. We maintain that every physician who observes and reflects is capable of forming an opinion upon the relative value of this theory. If it is true that all the comedians are not upon the stage, and that the world is a vast theatre, on which the most startling and affecting dramas are constantly being played, we may also say that all the insane are not in asylums, and that the physician who possesses the confidence of families, and to whom the intimacies of life are no secret, often discovers infirmaties and griefs, which, though a mystery to the world, are to him but the too evident results of monomania. To strike this word from the nosological list, it would be first neccessary to efface from the mind of the physician all those remembrances which, in recalling the frailty of human reason, are to him a constant subject of astonishment, of sadness, and of humiliation.

Lecture on Fever. By William Stokes, M. D.

I endeavored to convey to you, at our last lecture, that the conditions which have been described under the head of typhoid pneumonia, were probably examples not only of a pathological, but of an anatomical state of parts, different from that which is found in the simple original inflammation of the lung. And it is a great deal easier to say what they are not, than what they are,—to state their negative, rather than their positive characters.

Now I wish to state to you here, that a certain change has occurred in our opinions, as to the origin of the so-called typhoid inflammation of the lung. We at one time held, that it was the co-existence of gastritis, or enteritis which gave to the pneumonia the typhoid character. This view was held by us before we had, by that imperceptible power of conviction which arises from experience, admitted the two following principles in their entirety:

1. That symptoms which are diagnostic of local disease, where the patient has not an essential fever, are either altogether valueless, or much lessened in value when such a condition exists; and

2. That the gastric or gastro-enteric lesion is rare, even as a secondary disease in fever; so that when irritation of the structures of the intestinal tubes occurs, it is a remote, tertiary, and accidental phenomenon.

Our present opinion on this matter is, in general, the following: that in cases in which there are, in connection with the signs of typhoid lesion of the lung, evidences of gastro-intestinal disease, both the pulmonary and abdominal lesions spring from the one parent condition, and that so far from the specialities of the pulmonary, being derived from the accidental complication with the abdominal disease, both have a common character originating in the same source. I am quite sure that a large proportion of those cases described as asthenic pneumonia, depending on gastro-intestinal complication, have been examples of essential fever, with the two affections co-existing as secondary lesions.

We have seen that in these cases, I will not say of typhoid pneumonia, but of typhus or typhoid affections of the lung, the various physical signs of pneumonia, singly considered, may be present, and are actually often to be found. They fail, however, very frequently to present themselves in the regular order or succession which is observed in true acute pneumonia.

Now let us inquire whether there is any physical sign peculiar to these cases of typhus pulmonary affections, which does not occur, at least as the rule, in ordinary pneumonia; and I do not know of the existence of any such unless it be the sign of tympanitic resonance over the diseased lung, a condition first noticed by Dr. Hudson of this city, and to which he attaches some importance. Dr. Hudson states that in certain cases of typhoid consolidation of the lung, the sound on percussion, was very different from that observable in the ordinary condition of hepatization. He describes it as "a tympanitic clearness over the solidified lung, without air being present in the pleura;" indeed, he goes so far as to say that in one case the tympanitic

clearness on percussion, existed fully to the same degree, and of the same kind as in pneumo-thorax; here the lung was found perfectly solid throughout, with the exception of a small extent of the anterior and postero-inferior parts which was still crepitating.

It is very difficult to understand what condition of parts could have caused this singular tympanitic clearness over a solidified lung. When we speak of tympanitic resonance, it must be always borne in mind that the tympanitic sound does not always imply clearness on percussion. When you have a cavity in the centre of a solidified lung, or when you have hepatization of the left lung, in connection with flatulent distension of the stomach, the sound on percussion, though dull as compared with that of the healthy lung, has a distinctly tympanitic character; to this we have long been in the habit of giving the name of tympanitic dullness. I have never found it, however, to simulate the tympanitic resonance which occurs in pneumo-thorax, or in dilatation of the air cells; it is inferior in degree, and differeut in character. Dr. Hudson met with four cases, in which the observation of this phenomenon was followed by dissection. One was that of a man who died of extensive inflammation of the left lung, in the Meath Hospital, in the spring of 1832, in which, at the close of the case, from the hollow sound on percussion at the lower part of the left side, it having been previously quite dull, a pretty general opinion existed that a pneumonic abcess had formed and burst into the pleura. On dissection, the side having peen punctured, no air escaped; the lung was red and solid, but without abcess, and the pleura was adherent over two-thirds of its extent. I must, in justice to myself, state that in this case I never entertained the idea that an abcess had opened into the pleura. In another case, the lung was found hard and solid, from chronic pneumonia; and in the two remaining cases, the conditien of parts was similar to that which was presented by that first detailed.

Dr. Hudson admits that, in three of those cases, the tympanitic sound might be explained by reference to the distended state of the stomach; but in the fourth, he thinks that the explanation might be found in the faculty with which the vibrations of the air in the bronchus, and its larger divisions, may be supposed to be communicated through a lung in that condition, that is to say, solid throughout; and therefore, not permitting the loss in a mixed medium of solid and healthy lung of such vibrations.

I am quite prepared to admit that, with extensive solidification of the lung, the dull sound, on percussion, may yet have a tympanitic character; but I have seen no case in which this sound could be confounded with that of pneumo-thorax, or of dilatation of the air cells. With reference to the bearings of this question upon the signs of typhoid pneumonia, I can only at this moment remember two cases which are worth detailing to you. In one, tympanitic dullness did occur over the diseased portion of the lung, without our being able to account for it, by any accumulation of air, either in the pleura or in the stomach. The case was of a low putrid character, and I

remember suggesting it as a matter just possible that there might have been a typhoid pneumatosis developed in the diseased lung; but I am sure that we were not able to establish the existence of such a condition on dissection. The case occurred a good many years ago.

In the second case, which was one of manifest typhus fever, the posterior portion of the right lung became solid or nearly so, while the anterior face of the organ preserved its vesicular respiration. Now we found that over this portion of the chest, that is, over the front of the therax on the right side, the sound as compared with that over the opposite lung, was morbidly clear; it was true tympanitic clearness, not dullness, and it continued for three or four days, and gradually disappeared with the resolution of the posterior solidity: this case occurred in the Hospital last year, and was seen by Dr. Hudson himself. I confess I am quite at a loss to explain the nature or mode of production of this phenomenon. My friend, Dr. Lyons, mentions to me that in a case of asthenic pneumonia, occurring in a patient of intemperate habits, which we saw in consultation, the anterior superior part of the left lung presented, for a couple of days, a condition of morbid clearness, but subsequently became engaged in the general consolidation of the organ.

Dr. Lyons is disposed to regard the abnormal clearness which occurs in these cases, as the result of the increased pressure of the respiratory column of air in the still permeable portions of the pulmonary cells, which he conconsiders, in certain cases, become from this cause, expanded beyond the natural volume. His views are, that the inspired air presses with a certain force on the whole pulmonary surface, and that if a portion of this surface becomes impermeable to air, from solid deposit, occlusion of the tubes which forced it, or other cause, the remaining portion of the pulmonary tissue is acted on by the whole of the inspiratory force, before which it is thus made to expand; this portion of the lung may thus be considered to be in a condition of temporary emphysema, and so gives a correspondingly clear sound on percussion.

There is a circumstance in connection with the resolution of these typhoid or typhus diseases of the lung, different from what is commonly observed in asthenic pneumonia. You know that the true inflammatory hepatization rarely disappears in a sudden manner. It subsides gradually, and the transition state between dullness and clearness on percussion is generally marked by the "crepitus redux." In the cases before us, however, and especially where the disease is secondary to typhus fever, the resolution, as I have before stated to you, is often singularly rapid, and is often unattended by the crepitus of resolution. If then, you consider the state of solidification simply, we find it on the one hand, to form without the crepitus of the first stage of pneumonia, and on the other, to disappear rapidly, and without the rale of resolution. Thus we are permitted, as it were, to witness the silent and spontaneous development and retrocession of one of the secondary diseases of typhus.

This change from the state of consolidation to that of permeability to air, this rapid change, unattended by the crepitus and resolution, probably shows that the real disease was one unconnected with inflammation, either as a primary or a reactive condition.

You will remember that I suggested to you that some of the cases which have been described as typhoid pneumonia, might be held as examples of an aborted typhus. These were characterized by early consolidation, early disappearance of the typhus state, and a rapid, and often spontaneous subsidence of the local disease. I cannot help thinking that between such cases and those in which the general disease runs its usual course, there is another class or category of cases in which the progress of the merely pulmonary disease is marked, more or less, by signs of irritation or inflammation of the lung, which inflammation or irritation is either reactive or specific, or both reactive and specific. And I apprehend that these cases which, as it were, float between the aborted and the perfect typhus, are much more numerous than might be supposed; and in such instances, the case is often treated throughout, without a suspicion of its being really an example of typhus disease having been entertained.

What has now been said, should impress on your minds that rule in practice which I have so often urged upon you, namely, that the rules of diagnosis of local inflammatory disease which are good in ordinary cases, lose their value in a great measure when the patient has typhus fever. This was long ago proved by the researches of Louis on the condition of the brain in fever, and it was the non-recognition of this fact which constituted one of the greatest errors in the system of Broussais. I have told you, that if you gained nothing during the session but the knowledge and appreciation of this great principle, your time would have been well spent. How many cases have we not had of headache, delirium, watchfulness, or its opposite, coma,—yet without encephalitis; and so it is with the remaining cavities—symptoms of functional alteration are met with in connection with the cerebral, pulmonary, circulating and digestive systems in fever. They may or may not be attended by organic change, and that organic change, when it does exist, is not necessarily inflammation; and we cannot, I believe, lay down any satisfactory rule of diagnosis which would show, that in one case of local functional disturbance there was organic change, and in another that there was not. But this much we do know, that those groups of symptoms which are diagnostic of local inflammation in a case which is not fever, cease to be so when they occur in a case of typhus. Let this principle be ever present to your minds, for it is impossible to exaggerate its value. Long ago it was acted on empirically by the best physician, who refused to adopt anti-phlogistic measures in treating the local symptoms in typhus, and who employed stimulants, irrespective of them, when the general condition seemed to demand such treatment. It now comes before you as the result of an extended and accurate pathological investigation, and the study of the pulmonary phenomena,

as we have seen, enables us to go a step further, and to declare that not only are the symptoms of local irritation doubtful or illusive ; but that even the physical signs of a pneumonia, when occurring in a case of typhus, are not to be taken as proof that a local inflammation has occurred.

If these things be true so far as our typhus is concerned, it would appear probable, that in other acute diseases, under the influence of a law of periodicity, and, perhaps, in many that arise from the operation of an introduced poison, the same circumstances may be found, so that we might apply to a much larger circle of disease those principles as to the secondary local affections, which appear applicable to typhus fever.—*Virginia Med. & Surg. Journal.*

Case of Prominence of the Eyeballs with Diseases of the Thyroid Gland, and Heart. By J. H. Worthington. M. D., Medical Superintendent of the Friends' Asylum for Insane, Frankford, Penn. *Read before the Association of Superintendents of American Institutions for the Insane.*

In the *American Journal of Med. Sciences* for July, 1855, a number of cases are related, taken from foreign journals, of a peculiar affection of the eyeballs, thyroid gland, and heart. As this is a rare combination of symptoms, and presents distinctive features which seem to entitle it to recognition as a new, or, at least, previously undescribed disease, I have thought that a brief notice of a case, which has recently fallen under my observation, might be acceptable to the Association.

M. A. R., a widow, aged 41, blue eyes, brown hair, about five feet nine inches in height, was admitted as a patient into the Asylum on the 8th of March, 1854. For about four years she had been subject to frequent attacks of mental aberration, which had gradually increased in severity until it became necessary to place her under restraint. She was wild and excited, and the expression of her countenance was rendered peculiarly unpleasant by an unusual prominence of the eyeballs. Her pulse was full and strong. and this, in connection with the appearance of the eyes and excitement of manner, gave the impression of strong cerebral irritation. The medical certificate gave no account which threw any light on the peculiar features of the case, and no information of any value could be obtained from the persons who came with the patient. The thyroid gland was observed to be enlarged, but no particular attention was paid to this symptom She was kept under close observation, and the bowels were regulated by simple laxatives. Her excitement gradually subsided, and left her in the condition in which she has remained ever since.

Present state.—Pulse 100 to 110, full and soft, with a slight, perceptible thrill. Tongue clear, complexion quite pale, appetite excellent, bowels and catamenia regular, sleeps well.

Thyroid gland moderately enlarged, most so in its right lobe, presenting a tumor about two and a half inches in diameter, with a prominence of perhaps half an inch. Eyeballs very prominent, the white coat surrounding the cornea being visible to the extent of the sixteenth of an inch, when the eyes are open naturally. Vision is apparently unaffected. At times there is slight tendency to inflammation of the conjunctiva. The action of the heart appears to be inordinate, but, owing to mental peculiarities of the patient, but little information can be obtained of its condition by auscultation, nor any account of disordered sensations referable to the organ.

Mental condition.—Is generally quiet, and gives but little trouble. Never addresses any conversation to any one, and seems incapable of fixing her attention so as to comprehend any question, or return a correct answer. Is amiably disposed, and sometimes assists the attendants in their domestic operations. Has a strong disposition to elope, but whether that she may obtain tobacco, to the use of which she is much addicted, or with what object, it is impossible to ascertain. She generally carries a large bundle of rags and useless articles, which she probably designs as a place of concealment for her stock of tobacco. Manifests a strong predilection for the society of men.

Remarks.—Twenty-seven cases of this peculiar form of disease have been collected by Drs. Romberg and Heinock. Of this number four only were males, and all, with one exception, were of persons between twenty and thirty years of age. In the larger number of the cases there exist com bination of the three symptoms of palpitation of the heart, enlargement of the thyroid, and prominence of the eyes; while in six of the twenty-seven, one or other of the three was absent. Almost aldays the cardiac symptoms were the first observed, then, after a longer or shorter time, the swelling of the neck commenced, and the prominence of the eyes followed. In some instances, as proved by examination during life, as well as *post mortem*, the cardiac symptoms were owing to organic disease; while in others they depended merely on increased irritability of the organ. The thyroidal swelling is stated to be intimately connected, in some cases, at least, with the condition of the circulation, increasing during the palpitation of the heart, and afterwards subsiding. In other cases the condition of the thyroid has resembled true hypertrophy, and after a few years its consistence has been observed to be much increased. The prominence of the eyes is not regarded as of much consequence in its effects upon vision,as the sight was only in one case seriously impaired. It has been variously accounted for by attributing it to an increase of the aqueous humor, to relaxation of the ocular muscles, and to congestion in the posterior parts of the orbit. In two cases an extraordinary accumulation of fat was found in the cellular tissue behind the eyes, and this may, perhaps, be regarded as the probable cause of the exophthalmos.

Regarding the disease as a whole, the authors above named remark that certainly the large number of persons so affected have exhibited evident marks of anemia, such as a remarkable paleness of the skin, the peculiar sound audible in the blood-vessels of the neck, headaches, often very violent, giddiness, especially when in an erect posture, humming sound in the ears, attacks of fainting, and small, frequent pulse. Irregularity of the catamenia is also frequently present, while fluor albus, and sometimes complete amenorrhœa, have been found. Symptoms of an hysterical nature further distinguished not a few of the cases; the globus hystericus, neuralgic pains in different parts, coldness of the extremeties, and strange wanderings of the mind. One writer describes a remarkable calmness, and a great desire for pleasure, as characteristic features of the mental condition.

Owing to the inability of the patient to give any account of her sensasations, or of the manner in which the symptoms in her case commenced, and the order in which they succeeded each other, as also to the impossibility of obtaining information from any other source, the history of the above case is necessarily imperfect, and in itself can possess but little value. But as a peculiar mental condition has been observed in connection with the group of symptoms above described by those who have met with this form of disease, it appears to be especially worthy of notice by us who are engaged in treating mental disorders, and I have reported the case for the purpose of calling the attention of the profession to the subject.—*Am. Jour. of Insanity.*

Laceration of the Cornea of both Eyes, during a Convulsion. Reported by J. W. McKinney, M. D., of New Albany, Ill.

The following unusual case came under my observation recently, a brief outline of which I send you; and you are at liberty to dispose of it as you think best.

The patient was a child, three years old, step-daughter to Robert Richey. For eight or ten days preceding my first visit, the child had suffered from tertian intermittent, of a mild form; scarcely attracting the attention of the parents—not sufficiently so to resort to medication. On the day previous to my being called, it had a light chill, followed by an exacerbation, which passed off in a few hours, and in a short time it seemed as cheerful as usual.

Saturday Morning, April 19th, 1856.—I was summoned by the step-father to see the case, who stated that the child, soon after awakening from sleep in the morning, was attacked with convulsions. On visiting the patient, I found it lying on the bed with its head and shoulders elevated by means of pillows, and in a state of deep coma. The eyes were closed, pulse quick and frequent, breathing somewhat labored, head hot, while the general heat of the surface was little, if any, above that of the natural temperature. Slight spasmodic

jerking of the upper extremities still were present, which readily subsided on the application of cold water to the head, with mustard drafts to the wrists and ankles.

There was nothing peculiar in the symptoms, beyond that of ordinary convulsions of children, to attract my attention, except the coma, which I thought to be of a deeper lethargic character than was usual in such cases. I accordingly ordered a continuation of refrigerants to the head and drafts to the extremities, so long as the head remained preternaturally hot; and prescribed a brisk cathartic of calomel, 10 grs.; turpentine, thirty drops; mixed with a dessert-spoonful of castor oil; to be administered as soon as the patient was sufficiently recovered to swallow.

On the 20th, when again visiting the patient, I learned that the cathartic dose had been given, which acted freely during the night, and that there had been no return of the convulsions, but that the deep coma had continued, and it was with difficulty that the patient could be arroused so as to swallow anything when put into its mouth.

On raising the upper lids of the eyes, (which had been constantly closed since the convulsions the previous morning,) I discovered a laceration of the cornea of both eyes.

The lacerations were both transverse, pointing to the outer and inner canthus, and just below the lower border of the pupils, presenting smooth edges as though they had been cut by a sharp instrument. The rent in the left eye, extended entirely across the cornea; while that of the right, extended from the inner border of the cornea, or that next the greater canthus, only about two-thirds across its diameter, in the direction just stated.

The eyes were slightly flattened in front, from the escape of a portion of the aqueous humor through the rent, which imparted a dim contracted appearance to the sound portions of the cornea.

Acute inflamation of the conjunctiva of the left eye was set up, radiating from the two extreme points of the laceration.

Together with all this, there was complete paralysis of the left arm—an evidence of a more serious lesion in the brain and nerve centre. I stated to the parents my apprehensions of the existence of this serious lesion; while exhibiting to them the rent in the visual organs, which till now they were not aware of.

With a view to palliate and sustain for a time the already sinking energies, I prescribed calomel, 1 gr.; quinine, 2 grs.; every hour, till six doses were given, provided the patient could be had to swallow; and ordered lead-water and laudnum to be applied to the eyes; blisters to the temples; volatile liniament to the back of the neck and along the spine; with cold water to the head, whenever the surface was preternaturally hot. This treatment was persevered in with such alterations as the condition of the patient seemed to suggest from time to time, but all to no permanent good. The unfortunate little sufferer continued gradually to sink into a deep and deeper lethargy, which ended in a final cessation of all the functions on the fourth day from the convulsive struggle.

A few hours previous to death, the remaining portion of the aqueous humor of the left eye flowed out through the rent in the cornea.

I sought a *post-mortem* examination of the brain, but did not obtain permission, which I very much regret.—*North. West. Med. & Surg. Jour.*

Poisoning from the Vapors of the Spirits of Turpentine.

M. Marchal (of Caloi) gives us an account on the above subject, of which the following is an extract:

The patient was a woman who was poisoned from the effects of the smell of turpentine, after remaining for several days in a newly painted room. She was first attacked with violent colics, which were soon followed by much more alarming symptoms. She became ghastly pale, her eyes deeply marked, her lips scarcely moving, her breath cold, her voice gone, her limbs cold, her pulse almost imperceptible, and her sight weakened; her reason was unhurt, and she felt and looked as if she was dying. The active use of stimulants, both internal and external, restored her; and although there were several relapses, they were quickly suppressed by the same remedies, she was cured—but not before a month's time. The poisoning is undoubted. But was it from white lead or from the the turpentine?

A course of experiments by M. Marchal and other, preceding ones instituted by M. Mialhe, prove that the white lead is fixed in the paints, and forms its basis, and consequently it is impossible to attribute the accidents produced by fresh paint to it. Other experiments prove that the smell of turpentine produces poisonous effects in both animals and men. The account contains some general remarks, in which, after bringing forward several examples of poison from turpentine, the author tries to show how these vapors act in the *economie*, he discovered a *hypothsenisant* poison, and recommends stimulating treatment for the symptoms produced by it. The following is the conclusion of the account:

1st. White lead is fixed in the paint, and forms the basis, and can have nothing to do with the symptoms produced by remaining in a freshly painted room.

2d. The symptoms arise from the spirits of turpentine.

3d. The danger is the same from fresh paint, whether white lead or zinc form the basis.

4th. There is danger of poison from turpentine as long as the paint is not perfectly dry, and the only safeguard is not to inhabit a room until the smell of turpentine has disappeared.

5th. The poison from turpentine belongs to the same class as the poison from the emanations of flowers.

6th. The emanation of flowers act in two ways on the economy—by idiosyncracy and as a poison.

7th. The action of the vapors of turpentine consist in a greater or less *hyposthenisation.*

8th. The stimulating treatment actively administered acts the best against this poison: The *piristaltique* action of the intestines must be excited by the most appropriate means.—*Phil. Med. & Surg. Jour.* J. W. B.

NEW PUBLICATIONS

The Causes and Curative Treatment of Sterility, with a Preliminary Statement of the Physiology of Generation, with Colored Lithographs and numerous Wood-cut Illustrations. By AGUSTUS K. GARDNER, A. M., M. D., Permanent Member of the National Medical Association; Fellow of the New York Academy of Medicine; Member of the Massachusetts Medical Society; Member of the New York Pathological Society; Late Instructor on Diseases of Women and Children in the New York Preparatory School of Medicine; Physician for Diseases of Women in the New York Northern Dispensary; Author of Monographs on Ergot; Uterine Hemmorrhage, Rupture of Perinæum, &c., &c. DEWITT & DAVENPORT, New York, Publishers.

From time immemorial the Phisiology of Generation has been regarded as a subject of deep scientific interest, as well as absorbing curiosity. So, too, its counterpart, sterility, has been a matter of no less curiosity and learned research. Nor as the former given rise to greater contrariety of opinion and doctrine, and at different epochs to less satisfastory theories, and often most ludicrous, if not ridiculous explanations of its recondite phenomena, than the latter. Both have enlisted the talents and drawn forth the energies of all ages, and the present generation of Physiologists and Therapeutists are felicitating themselves with the conviction that the mysteries of both the one and the other are equally unveiled. Numerous ingenious and many strictly learned and philosophical treatises are extant which shed much light upon most questions connected both with Generation and Sterility, and perhaps it may, with propriety, be said that, at this time, truth in reference to all is as nearly approximated as the appliances of art and the modes of investigating Physiological and Therapeutical subjects warrants us to expect.

Whether the book before us, with all the array o honerary titles affixed, will add to the aggregate of reliable information on the topics of which it treats, previously in the hands of the profession, we find ourselves strongly inclined to doubt. If we have conned its pages intelligently, it contains no really new and important doctrines in Physiology, or strictly novel or well established principle in Therapeutics beyond those with which the faithful medical investigator is already familiar.

It is true that there is an ostentatious display of highly colored litho graphs of the female organs of generation with the speculum inserted, and

in this particular, it must be conceded, there is something novel. But in regard to these *pictures*, we must say in the language of another, that "we are averse to any unnecessary exhibition of this kind, even in print," and we would add, in exclusively professional works.

The legitimate purpose of engravings, cuts and lithographs in works of science is doubtless to instruct—to illustrate, and make more clearly intelligible what would otherwise be obscure, and with difficulty understood. If, then, this view of the subject be correct, it is plain that they should have no more of adornings than are demanded to make more obvious what, without them, would be unintelligible.

They should most certainly be accurate delineations of nature, not overwrought, fancy sketches. In their design and execution they should be made subservient to the advancement of *science*—they ought never to be made to minister to licentiousness or the gratification of prurient curiosity. Whether the author has had in view to pander to the vicious tastes of the age, to gratify the vulgar curiosity of "eyes and minds unholy," we confess ourselves at a loss to determine.

That charity which is easily entreated, that hopeth all things and is kind, induces us to hope that he has been actuated by no other than pure and legitimate motives—that the sordid element alone has not been *the sole motive* that prompted him to produce the work. That it does not contain matter which may be made available to useful purposes in practice, we would not insinuate, nor would we insist that it is altogether jejune in principle and doctrine.

The publishers have performed their part in the highest perfection of art, and we hope may receive ample remuneration for their expenditure, and for the skill displayed in its execution.

It can be found in this city at W. B. Howe's. K.

Pronouncing Medical Lexicon; containing the Correct Pronunciation and Definition of most of the Terms used by Speakers and Writers on Medicine and the Collateral Sciences, with Adenda. By C. H. Cleveland, M. D. Langley Brothers, Publishers, Cincinnati,

This little but convenient book is on our table. We have examined it with considerable care, and while, from the brevity of its definitions, we should be doing violence to sound intelligence in the use of technical language, either to recommend it, to the exclusion of the more copious and learned dictionaries of Hooper, Hoblyn and Dunglison, not to mention the older but erudite productions of James and Motherby, or to suggest that for any considerable time it will supply the wants of the junior members of the profession. Yet we deem it proper to say that, to the young and ardent

investigator, and even those who are nearer the terminus of a professional career, it will prove a ready and time-saving assistant.

Constructed, as it is, on the phonetic system, the author seems to have adopted a simple and rational basis of orthography in pronunciation. We have long been convinced that it was within the powers of invention to devise characters sufficient to represent definitely every elementary sound of the human voice. We have felt, too, that lexicographers were neglecting the true interests of the grammar of our language in adhering with such tenacity to the crude and often perplexing orthography of by-gone ages, as founded on derivation—embarrassing, not unfreqnently to a great extent, the well informed and competent, even in the practice of rapid business chirography.

We hope the example thus set may be followed in future, and that it may be extended to the orthography of our vernacular in all its applications.

The addenda, made up of the abreviations used in prescriptions accurately translated, and a list of poisons with their appropriate antidotes, we regard as by no means the least satisfactory feature of the work. That the preparatory education of every physician and apothecary ought to be so complete that any legibly written prescription might be comprehended at a glance, all will concede.

That the usages of our young and rapidly progressing country should not, ere this, have made such preliminary attainment a primary element in professional education may be justly regarded as a matter of regret.

We have long hoped that an influence would be effused from the American Medical Association which would have effected so desirable a change. We have hoped other changes no less desirable, and perhaps as regards the actual *science of medicine*, of vastly greater importance. We still hope that, at a period not far distant, such radical changes—may we not say reformations—will result from the workings of that institution. Surely it would seem that its mission is but half completed if *only* its members are to hold an annual congress, hear a complimentary address from its presiding officer, a few reports from systematically arranged committees, enjoy a boat ride, receive and reciprocate compliments at parties and levees—in a word, if little else be accomplished than the making of acquaintances, which in the progress of the absorbing and hurrying events of the day, are at best but transient.

The book, however, is before the world, and whatever may be the good or ill opinion of a few dditors, will be judged according to its real merits, and both the author and publishers will have the satisfaction of knowing that they arc in the hands of a discriminating and candid public.

It can be found in this city at Raymond & Selleck's, 137 Jefferson avenue.

K.

EDITORIAL ITEMS.

Our first Volume.

The present number completes the first volume of the *Medical Independent*, and this fact prompts us to say a few words to our readers, with reference to our position and prospects. The journal has been fairly introduced, and speaks for itself—it must stand on its own merits.

Like all new projects, it has had to contend with many obstacles, incident to its inception and introduction to the profession. These barriers have prevented us from fulfilling in all particulars, our designs as set forth in the beginning, but we see no reason for altering the general plan which first offered, as indicating what might prove most acceptable, and at no very distant day we hope to fulfill in every essential particular, the engagements of our prospectus.

To our contributors we feel under many obligations for their co-operation, and especially for the interest and zeal which they have manifested for our success.

With the daily increase of our subscribers we are adding many who will become efficient colaborators.

As soon as we shall have completed the series on the Links connecting the Vegetable and Animal Kingdoms, Dr. Goadby will offer papers on the subject of "Histology," also serial articles upon "the Structure and Functions of Insects." At the present day it is quite supererogatory to insist upon the great advantages which accrue to the profession from a knowledge of *Comparative Physiology* as well as comparative anatomy, and yet, valuable as it confessedly is, it forms but a small part in the curriculum of medical education. The bold and daring

operations of surgery now performed daily throughout the civilized world, could never have been attempted but for the teachings of comparative anatomy. This science first taught us the laws of life, and these once known, prepared the way for all that has followed.

A knowledge of the exact nature, ultimate structure and anatomical relation of tissues, we hold to be essential if not more valuable than the gross anatomical relations of parts and functions; with this view, we have no doubt that Dr. G. will furnish many valuable contributions to this branch of science.

Our subscription list is slowly but surely making its returns, cheering the hearts and encouraging the hands of those who are interested in the financial department of the journal. Thus far we have no reason to complain; indeed, we have more of a list, at the end of the first volume, than we had reason to expect. But with our renewed exertions, and the aid of many friends who are laboring in our behalf, we have reason to look for an aggregate that will at once make the journal *Independent* in its finances, as well as in the expression of thought. R.

"Maledicus a malefico non distat nisi occasione."
"Matters Personal."

The July number of the *Peninsular Journal* poured out of its Editorial *Pitcher*, a scurrillous attack upon our senior, Dr. Goadby, couched in an allegorical attempt at wit. In the absence of Dr. G,, we shall take the liberty to present to our readers a few comments upon the *motives* which prompted the attack, and the source from which it emanated.

Not that we have any fears of its derogatory influence upon the character assailed, or upon the journal with which Dr. G. is identified. The source of the slang, and the medium through which it is disseminated, both alike render it harmless, and provide a guaranty against all cause for apprehension.

The readers of the *Peninsular Journal* will only have to refer to their back numbers, (if any have been preserved), and turn

over its meagre pages, to the editorial department, to remind them of its beligerant propensities. At one time dealing out bitter personalities and animadversion to the editor of the *North-Western Med. & Surg. Journal.* At another time, with pugnacious magniloquence, charging its batteries upon the *Buffalo Medical Journal.* Later, (in the June number), it assailed D. Humphreys Storer, of Boston, implying that he had loaned his name to a homeœpathic quack, whose card appeared in the *National Intelligencer.* As if there could not be, by possibility, two *John Smiths*, or even two Humphreys Storers in Boston. The most probable explanation, and one which would readily occur to a liberal, unprejudiced mind, is that the infinitessimal quack had used the name of D. Humphreys Storer, and made it available, without the knowledge or consent of the author. The following tart reply from Dr. Storer, to the dignified head of the American Medical Association, is what might have been expected—the spirit of just indignation.

To Zina Pitcher, M. D., Editor of the *Peninsular Journal :*

Dear Sir:—In the last number of the *Peninsular Journal of Medicine* I find a malicious and most unwarrantable attack upon me by one of its conductors or with their permission. As the President of the American Medical Association is senior editor of that journal, an importance may be attached to the article in question, which would otherwise be unnoticed. I feel called upon, therefore, to state that this allegation, so far as it has referred to me, is *false*, and that for more than 30 years, it has been my constant endeavor to maintain the honor of our profession, and that no man has the right to call me *"his friend"* who would intimate otherwise. Respectfully,

DAVID HUMPHREYS STORER.

I will thank you to insert the above in your next number, that my reply may follow the slander. D. H. S.

Do the antecedants of David Humphreys Storer, of Boston, point to anything upon which to base such an insinuation? Coming from the *mouth-piece* of the American Medical Association, "an importance may be attached to the article in question, *which would otherwise be unnoticed.*" Complimentary, indeed!

But the next attack on the list has been made, as we have before stated, upon the senior editor of the *Independent*, and the same reason which actuated D. Humphreys Storer, in his reply, has prompted us to notice this last slander.

This contemptuous detraction, is not only without provocation, but for our present purpose is a little premature, inasmuch as we have not yet received the *living biography* of the delectable writer. For the *comparative* merits of *magnates* as well as *comparative anatomy*, even though considered allegorically, show to best advantage when placed in juxta position.

All that Dr. Goadby claimed for the Lusus Naturæ, as illustrated in our April number, was the presentation of a well authenticated fact, exhibiting a curiosity or "freak of nature." In doing this, he evinced a laudable frankness in acknowledging that he was not familiar with all the generic and specific detail, of its natural history.

Is it not strange that a man who has devoted his whole life to the revelations of the microscope, should never have discovered the whole natural history of the Mink! Nay, this herculean labor was reserved for the great head of the American Medical Association—a *labor* that requires the dignity and penetration of a mind that has suffered no "arrest of development." *Again* has "the mountain labored and brought forth a mouse."

In doing this, however, he ought to have informed his readers, that he was giving them only an *old fogy classification*, there being a more modern and much more correct one.

Before Dr. G. became identified with a new journal, he had few greater admirers as a naturalist whose attainments in the scientific world were of a high order than the very writer who now seeks behind the veil of hieroglyphics to traduce his character. His contributions were earnestly solicited by the editors of the *Peninsular Journal*, until they ascertained that it would cost a small sum each month to illustrate his subjects. The pages of a new journal were opened, Dr. Goadby invited to the editorial supervision of its scientific department, and requested to illustrate his subjects, when necessary, by preparations drawn from his cabinet—a collection conceded to be second to no other. Is it strange, then, with such a journal in the field—one

that is *worthy of notice only because its senior editor has been elevated*, by force of circumstances,—that a new medical monthly, starting under the most promising auspices, should provoke jealousy? Rather, is it not surprising that this shower of abuse has not fallen before? If we are not committing sacrilege upon dignity—*venerable perhaps on account of age*—we beg to ask, if the author of that effected erudition of natural history, would not have been employing his time to a better purpose in the improvement of his hospital *practice*, the study of medical ethics, or, having obtained "a copy of Lindley Murray," in devoting his leisure to the proper development of that forth-coming offspring of his *reproductive* cerebral organs, which, from his accidental position—(the result of a bad precedent)—must be matured within a period of *nine months*.

Our magnanimity leads us to hope that time and appropriate prophylaxis may prevent an abortion.

But if this erudite senior editor, in his further elucidation of the "*collateral sciences*," should feel disposed to indulge his natural instinct in the defamation of character, for the sake of the honor and dignity of that body which has endowed him with temporary influence, let it be done by one of his "*corporal bull-heads*," giving the preference to his *brazen* parasite, whose self-conceit is only exceeded by his garrulity, known very generally by his private mark—the pronoun *I* and *myself*. Then, with a copy of the English grammar and the aid of Webster's unabridged, we might look for a production worthy of *biographic immortality*.

☞ We desire to call the attention of our readers to the announcement of the N. Y. University, in our advertising sheet. It gives all the requisite information respecting the advantages offered, by that school—Clinical instruction, Hospitals, Infirmaries, Dispensaries, Museums, Apparatus, Fees, &c.

Its Faculty, composed of such men as Valentine Mott, Martin Paine, Gunning S. Bedford, John W. Draper, Alfred C. Post, Wm. H. Vanburen, John S. Metcalf, &c., is ample commendation and sufficient advertisement to insure its usual full attendance for the session of 1856–7.

Medical "Snobs."

The last number of the Philadelphia Medical and Surgical Journal contains some very pertinent and well timed editorial remarks upon a certain class of men which the author denominates "*notoriety seekers.*" They are the pest of every community but most especially of cities where any considerable number of professional men are brought into competition.

A few quotations from the article to which we have alluded will indicate most clearly their generic classification. We have taken the liberty to add some italics in order to indicate more prominently the personage in our Medical Societies, and probably our readers will find no difficulty in recognizing the *thing* wherever he is met with.

"These gentlemen are by no means confined to politics, the genus is found in literary circles, scientific bodies, law acsociations, *and largely in Medical Societies.* In the latter they flourish hugely. The practice of the profession allowing of little opportunity for such display, they spend days and money *to visit any gathering of medical men*, in order *to appear* "on the minutes," to offer a resolution—to thunder away at quackery, themselves the most arrant quacks.

This little noisy animal is sure to be seen wherever a new Constitution is to be "got up," a set of medical ethics to be defended—or some friendless member of the body medical *is to be kicked out or insulted.* He delights in trying honorable men and insultiug them, in *appearing as Chairman* of some learned committee,*whose labor is performed by some modest unpretending member*, while the notoriety-seeker makes all the public blowing, and claims all the honor of the great movement which originated, he says, with *himself.*

These fellows also congregate in parties and *cliques* of mutual admiration societies and *praise each other to the echo.* We can predict with unerring certainty, after watching a few meetings of any public medical body who will next figure as the magnus Apollo, who will be the Dii Majores, who the Dii Minores, and who the penates.

'Tis amusing to see the *early* struggles of this genus of animal for position. The least favor from the greater lights

is received with obsequious humility, and at the same time, the bidding of these lights is scrupulously obeyed—a hint, a nod, a wink, sends a poor devil whom the Gods wish to damn to eternal perdition. The slaves do their master's wishes better than he could himself—and when they have arrived at the so much sought for "bad eminence," they have their *pimps* and *agents* and act like SIR ORACLE—when they speak let no dog bark.

These fellows foolishly imagine that by this dirty process they attain eminence in their professsion. They attain notoriety, so does the man that is hung. No, true greatness feels the vanity of such toys and looks to a higher source for the hearts and sympathies of man and God. *Our public Medical Societies are cursed by these notoriety seekers.* Their voice is heard every where in public and the true end and purposes of such bodies are "missed and come short of" because of the ill jangling and *ill manners* of the notoriety seekers.

Reform it brethren, reform it altogether. Smile the greatness of these little men into its legitimate nothingness, and let true *science* and *worth* be honored."

These "*snobs*," as we are disposed to call them are a disgrace to the profession, on account of their ignorance, their elementary education not enabling them to arrange a half dozen sentences in grammatical construction. They may have a smattering of knowledge which has been drummed into them at the rate of five or six lectures per diem, for the space of three times three months, and if examined *at the close* have been allowed to pass into the profession. This nine months grinding in the professional mill, will furnish them with all the capital which an uncultivated brain can invest, and all that is required to make the full grown medical "snob" is vanity, perseverance and self-love. The result then of this nine months gestation is at best an abortion.

But to "*reform*" such men is asking too much of the profession. Medical men have no time to do the work of the country *school-marm*, or, to give fire-side parental instruction in manners. Besides it is hopelessly too late, for although purile, they are "too old to learn." They are beyond the reach of all the ordinary rules of teaching—even the sting of ridicule

sheathed in the garb of friendship, hence in many circles where leisure and merriment meet, they are the "nuts to crack." And this very class of men is contributing more than any other cause, to the success and propigation of quackery. The community mistake *notoriety* for a trust-worthy reputation founded upon real merit; these men get into a business, and keep their patients just long enough to disgust them not only with their ill manners, *horse laugh*, and self adulation, but their empirical dosing, leaving their minds susceptible to the garrulity of any old woman, whether she advocates little pills or the "*cold water system.*"

Nay! the work of reformation must be done out side of the profession; guard its portals, let elementary education be the sine qua non, "*duly qualified*" the pass-word, and we should not be so much annoyed with *notoriety seekers.*

☞It gives us pleasure to introduce to our readers through the medium of the advertising sheet another enterprising and competent druggist—Dr. T. R. Spence, 164 Woodward ave.

Physicians throughout the State have, in too many instances, sent to New York and paid express charges on many articles which may be obtained of, or through our druggists at a very little, if any, above New York prices.

What cannot be found in the line of the legitimate drug trade at T. R. Spence's, Higby & Stearn's, Geo. B. Dickinson & Co.'s, Henry Simoneau's, or Farrand & Wheaton's, not to mention some other well established houses in our city, would be a rare specimen, indeed.

Dr. Spence is devoting much attention to Pharmacy, and having been a successful practioner, is prepared to appreciate the wants of physicians, not only with regard to the purity of drugs and accuracy of combination, but that nicety in neutralising what is obnoxious in the flavor or taste of remedies, without deteriorating their virtues.

Pharmaceutists of the present day are accomplishing much in this department of their branch of science. With the ex-

ception of a few drugs, (at the head of which list stands Assafœtida,) medicines are now made by combination, comparatively *palatable*. Let the profession properly appreciate this effort to cultivate what perhaps may not be inappropriately termed "*accomplishments*" of the Pharmaceutist, and the practice of medicine will not only become easier, but by far more agreeable.

We hope to have the pleasure of offering to our readers many valuable formulæ from the laboratory of Dr. Spence and others, having in view efficiency, agreeable flavor, and economy.

The following, from Dr. Spence, may justly claim all the above virtues.

TINCT. CALISAYA.

℞ Calisaya Bark Bruised	1 pound.	
Caraway Seed	"	
Cinamon	"	
Orange Peel	"	
Zingebor	"	a a 1 drachm.
Cardamon Seed	"	½ drachm.
Tinct. Angelica		℥1. ℨ
Sherry Wine		O 1.
Simple Syrup		O 1 1.
Diluted Alcohol	q. s.	

Macerate the solid ingredients in sufficient of the alcohol to thoroughly moisten it for 48 hours. Transfer to a displacing aparatus and obtain by *careful maniputation* 5 pints of *clear* liquor *fully impregnated*, and add the Angelica, Wine and Syrup.

Medium dose as a tonic, a desert spoonful three or four times a day.

By reference to the U. S. Dispensatory, or other modern works on Materia Medica it will be seen that *Calisya* is the commercial name for the valuable Yellow Peruvian Bark.

We have used this preparation as a substitute for Quinine in very many cases, both for its anti-periodic and tonic properties, and have been much pleased with its efficiency.

The Calyasia in the classification of the varieties of bark contains the greatest amount of Qunine, and we are disposed to believe that as a *prophylactic* in intermittents, it must be regarded as preferable, uniting all the properties of the best bark with a sufficient amount of Quinine to arrest the most obstinate paroxysms. Dr. Spence will be happy to furnish this preparation to country practitioners in those districts where intermittents are most rife, for the purpose of testing its virtues.

☞ The following remarks from Professor Syme, we find in the last number of the Memphis "Medical Recorder," and at a time when medical journals are made the medium for advertising men who would make better butchers than surgeons, we regard them as peculiarly appropriate:

Surgical Dexterity.—Professor Syme says—"Manual dexterity in Surgery has no real existence, so far as the overcoming of mechanical difficulties is concerned. The manual duty of a surgeon may be compared to that required for steering a vessel; where there is little difficulty in turning the wheel, while the direction in which it is turned determines the fate of the ship, and all on board. The result of an operation, in so far as its execution is concerned, depends on knowing what to do, when to do it, and how to do it. You may be assured," he continues, "that there are few more dangerous members of society than those empty-headed operators who derive confidence merely on the ground of possessing 'good hands.' They are easily recognized by their simpering and swaggering and flourishing their knives, as if the sole object of an operation were to make incisions, without reference to the consequences."

☞ We have received from the publishers a handsome volume, entitled "The Microscope and its Revelations." By Wm. B. Carpenter, M. D., F. R. S., &c. It would have given us great pleasure to have inserted a somewhat extended notice of it in our present number, had it come to hand sufficiently early. But in our next, we shall not fail to render that verdict of just criticism, which a production of such rare merit deserves.

☞ We have received the July number of the *Scalpel* and we advise all *old fogies* to obtain a copy of it. It will remove the scales and dust of centuries from their eyes, and exhibit to them the motive power of progress, which characterises the 19th century.

Removal of Milk in the Breast.—Mr. Gibbon states, in the Lancet, that the application of belladonna, to the mamma is an excellent means of checking the secretion of milk. With a lotion consisting of a half drachm of the extract of belladonna to half a pint of water, he has succeeded in arresting the secretion in three protracted cases, where a variety of expedients had failed.

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